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LISTS OF SPECIES

Birds of the Totare River Basin, Colombia

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ABSTRACT: The Totare River Basin is one of the largest and most important river basins in the Department of Tolima, Colombia. Despite its rich and diverse fauna, little is known about the bird species that inhabit this region. This study presents a list of birds compiled from field surveys along the river basin (from 270 to 3642 m a.s.l.) conducted between February and March 2007, plus a review of literature published so far, and complemented by opportunistic records during eight consecutive years. The checklist is comprised of 410 species, of which 11 are Colombian endemic, seven semi-endemic, 36 migratory, and 12 endangered species. Fourteen species are new records for the municipality of Ibagué, and 10 are new and noteworthy records from the east slope of the Cordillera Central. This checklist identifies as sites of conservation priority to Clarita Botero and Ambala.

INTRODUCTION

Colombia is considered to be the country with the world's largest avifauna, harboring about 1,822 species (Stiles 2011). However, little is known about the extent of bird diversity in many regions of the country (Cuervo *et al.* 2008a, b; Arbeláez-Cortés *et al*. 2011). For instance, about 700 bird species have been recorded in the Department of Tolima, but most information on them is preliminary and basic, occasioning lack of knowledge for many areas (Reinoso-Florez *et al*. 2009).

In the Department of Tolima, the government environmental authorities, such as CORTOLIMA, are using the river basins as territorial units to delineate land use plans (Reinoso-Florez *et al.* 2009). To do this, the authorities assessed different social and ecological aspects, including the conduction of rapid evaluations of flora and fauna. From these assessments they devise lists of species that, together with forest cover, are utilized to identify priority areas for conservation (Reinoso-Florez *et al.* 2009).

The Totare River Basin is one of the largest basins in the department of Tolima, spreading through many municipalities and including a great variety of life zones and habitats (CORTOLIMA 2002). However, very few studies concerning avifauna in this region have been published. Except for the municipality of Ibagué, which has been widely studied (Parra-Hernandez *et al*. 2007), the other municipalities have not been studied recently and few publications exist (Chapman 1917; Reinoso-Florez *et al.* 2009; Bejarano-Bonilla and Jiménez-Bonilla 2009; Losada-Prado and Molina-Martínez 2011). The aim of this study was to produce an update checklist of birds of the Totare river basin, based on my field observations and on public information. Some results were discussed to guide some conservation actions.

MATERIALS AND METHODS

Study site

The Totare River Basin is located in the north of the Tolima department on the eastern slope of the Cordillera Central of Colombia, between 74°49′ W and 75°24′ W, and between 4°26′ N and 4°48′ N (Figure 1). The basin has an area of 143,205 h and includes the municipalities of Alvarado, Anzoátegui, Ibagué, Piedras, Santa Isabel, and Venadillo. The Totare River originates in the El Encanto

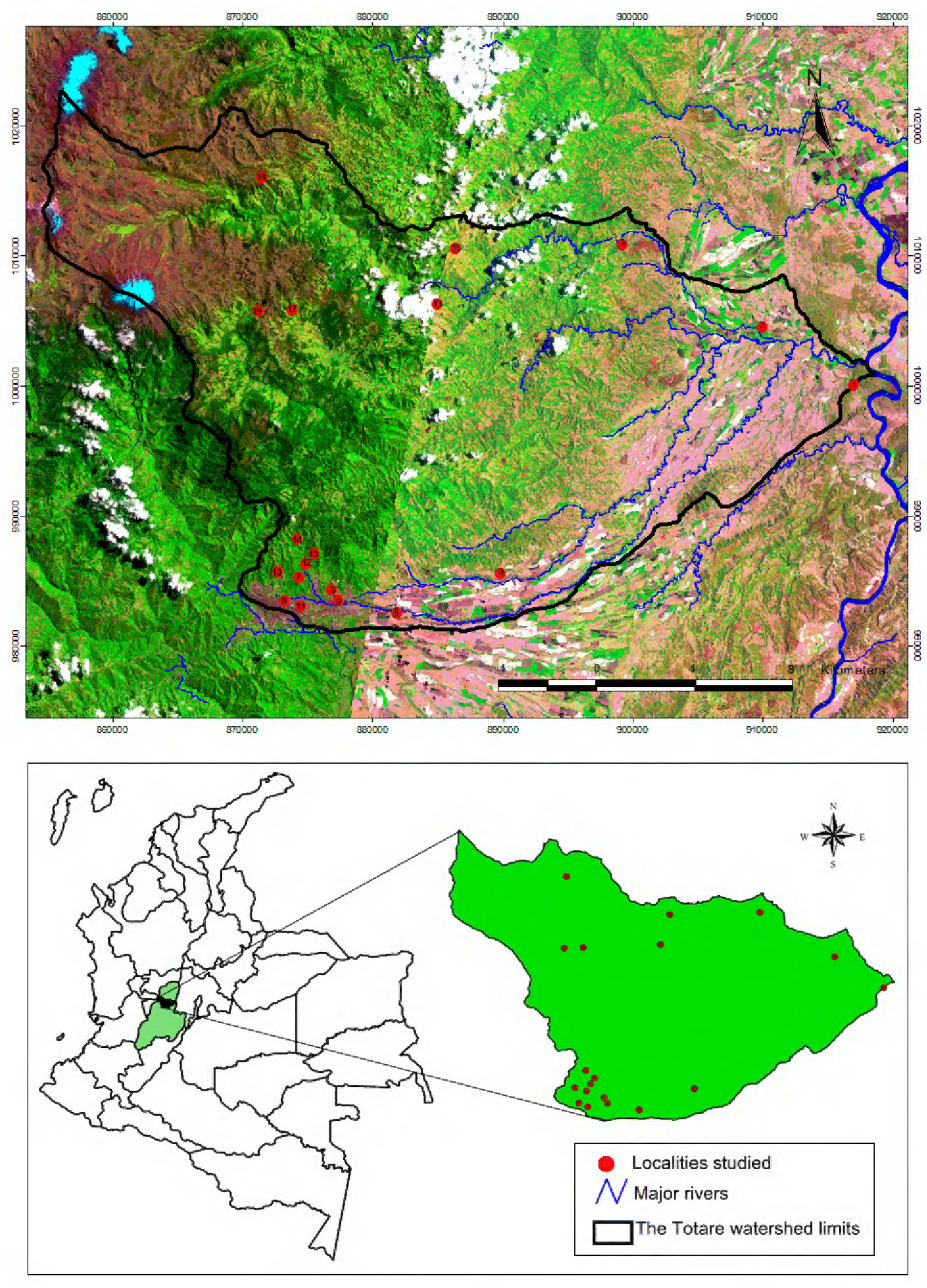

FIGURE 1. Map of Totare River Basin, Tolima department, Colombia. Inset shows the location of the basin in Colombia and the Tolima department. The numbers indicate localities were fieldwork has been conducted. These numbers correspond to the numbering scheme outlined in Table 1. The color in the map correspond to the satelital imagem where in geral, green is natural vegetation, brown is exposed soil and purple is human constructions.

Lake in Anzoátegui at 3963 m a.s.l., and runs 85 km until its mouth at 216 m a.s.l. between the municipalities of Piedras and Venadillo in the Magdalena River (CORTOLIMA 2002). Mean precipitation is around 1,899 mm/year, and mean temperature ranges between -5°C at 3963 m a.s.l. and 31°C in the lower zone to 216 m a.s.l. (CORTOLIMA 1998).

This basin includes several life zones, according to Holdridges' classification, such as tropical dry forest, premontane wet forest, low montane wet forest, montane pluvial forest, and *páramo* vegetation (Pomar and Vargas unpublished data). The basin forests are highly fragmented, which represented 17 % of the area total, with 7% being mature forest and 10% secondary forest (CORTOLIMA 1998). The majority of the forest patches are relicts that remain along streams, rivers, and in ravines or irregular terrain that is unsuitable for any land use; however, there are some continuous forest patches in the highlands. These forest patches are surrounded by grasslands, farms, and some human populated areas (CORTOLIMA unpublished data).

Data collection

Fieldwork of this study occurred as part of the project "Biodiversidad faunistica y floristica de la cuenca del Río Totare fase III," a collaboration between Universidad del Tolima and Corporación Autonoma Regional del Tolima. Observations were conducted in February and May 2007 in 10 localities within the Totare River Basin. Their elevations ranged between 270 and 3640 m. Each location was visited in one day of each month, and observations were done in the morning (06:00 - 12:00) and in the afternoon (14:00- 18:00). Birds were studied using standardized methodologies for assessing bird populations, including mist-netting (six nets of 12 m), fixed-radius point counts, non-systematic field observations and tape-recordings. These were made using a recorder Olympus V-N480 PC, and audio recordings were deposited in the database of Xeno-canto America.

Additionally, in order to provide a complete list of bird species occurring in the Totare River Basin, I compiled information from the following sources: 1) field observations carried out between 2003 and 2010 in different localities within the basin, using transects (including visual and vocal records) and supplementary observations without method restrictions; these records were obtained by the author in the municipality of Ibagué, 2) a critical review of the published literature (Parra-Hernandez *et al.* 2007), which presented different methodologies and time periods; and 3) inspection of the bird collection at the Universidad del Tolima (CZUT-Or). I detail information for 19 localities studied in the Totare River Basin (Figure 1, Table 1).

Taxonomy and nomenclature followed the classification used by the South American Classification Committee

Table 1. Localities in the Totare River Basin where bird species have been inventoried, with information on site locations and habitat use by species. The number before the name of each locality corresponds to the numbering in Figure 1. Abbreviations correspond to the name of each locality.

#	LOCALITY, MUNICIPALITY	ABBREVIATION	GEOGRAPHIC COORDINATES		ELEVATION (m a.s.l)	GENERAL HABITAT TYPES
1	La Manga de los Rodríguez, Piedras	Ma	4°35′58.7″ N	74°49′44.0″ W	270	Grassland, Riparian forest, small lake.
2	La Argelia, Venadillo	Ar	4°38′22.6″ N	74°53′32.7″ W	310	Grassland, Riparian forest
3	Potrerito,Venadillo	Pot	4°41′49.1″ N	74°59′22.3″ W	700	Grassland, Tropical dry forest
4	Chucuní, Ibagué	Chu	4°28′5.0″ N	75°4′25.8″ W	750	Cultivated land, grassland, shrub, Riparian forest, Tropical dry forest,
5	Salado, Ibagué	Sal	4°26′26.1" N	75°8′41.8" W	900	Small lake, grassland, cultiveted land
6	Minas del Vergel, Ibagué	MV	4°27′21.9" N	75°11′25.1" W	1100 - 1160	Cultiveted land, grassland, shrub, tropical humid forest, riparian forest.
7	Calambeo, Ibagué	Cal	4°27′52.9" N	75°12′47" W	1200 - 1370	Cultiveted land, grassland, shrub, tropical humid forest, riparian forest.
8	Jardín Botánico San Jorge, Ibagué	SJ	4°26′56.5" N	75°13′22.8" W	1200 - 1360	Tropical humid forest, riparian forest, grassland
9	Bosque del Colegio HG SOS, Ibagué	Sos	4°26′56.7" N	75°11′8.9" W	1100	Relictual tropical humid forest
10	Clarita Botero, Ibagué	Clar	4°28′8.2″ N	75°13′41" W	1400 - 2000	Cultiveted land, grassland, shrub, tropical humid forest, riparian forest.
11	Zona Urbana, Ibagué	Urb	4°26′41" N	75°12′42" W	800 - 1285	Parks, green areas, cultivated land, relictual forest.
12	Ambala zona baja, Ibagué	Amb A	4°28′27.3" N	75°12′29.4" W	1500	Cultivated land, grassland, tropical dry forest
13	Ambala zona media, Ibagué	Amb B	4°28′54,6″ N	75°12′9,9″ W	1800	Tropical humid forest, cultivated land
14	Ambala zona Alta, Ibagué	Amb C	4°29′30.2" N	75°12′51.6" W	2100	Tropical humid forest, cultivated land
15	Guaimaral, Santa Isabel	Gua	4°41′38,1″ N	75°6′20,1″ W	2100	Tropical humid forest, grassland, cultivated land
16	La Flor, Anzoátegui	Fl	4°39′18.5″ N	75°7′3.3″ W	2100	Tropical humid forest, grassland, cultivated land
17	Palomar, Anzoategui	Pal	4°39′4″ N	75°13′4″ W	2800	Tropical humid forest, grassland, cultivated land
18	La Estrella, Santa Isabel	Est	4°44′36″ N	75°14′22″ W	3580	Grassland, cultivated areas, open páramo grasslands, espeletia paramo, relictual mountain forests.
19	La Cascada, Anzoategui	Cas	4°39′00″ N	75°14′32″ W	3642	Grassland, cultivated areas, open páramo grasslands, espeletia paramo, relictual mountain forests.

(Remsen *et al*. 2014). Endemicity from Colombia was assigned following Stiles (1998) and Hilty and Brown (1986). For the conservation status, I followed Renjifo *et al*. (2002) and The IUCN Red List of Threatened Species (2012). The new distribution reports of the Ibagué municipality were assigned employing Parra-Hernandez *et al*. (2007) and for the new distribution records, I followed mainly Hilty and Brown (1986).

Data Analysis

In order to explore the data and to account for errors that arise from studying sample efforts with different methods, I calculated the Sorensen similarity index to determine the variation in species composition between localities. Dimensionalities were reduced by Non-Metric Multidimensional Scaling (NMDS) based on a matrix of presence-absence species. Contrasts in species composition were displayed in two-dimensional graphics (Legendre and Legendre 1998), with points designating the localities where each species was found. I used the Sorensen index and NMDS to reduce the problems generated by differences in sample efforts between localities (Ludwing and Reinolds 1988; Krebs 1989). The non-parametric species richness estimator Chao 2 and ICE were calculated using EstimateS 7,5 (Colwell 2005) to determine data representativeness from richness.

Results and Discussion

The checklist of the Totare River Basin produced in this study includes a total of 410 bird species belonging to 53 families and 178 genera (Table 2). This species richness represents 22% of all bird species reported in Colombia.

Around 79% of the species were represented by two or more records, and about 73% of the species were found in two or more localities. Around 53% of the species have additional support in audio recording, photos, or museum specimens.

Eleven Colombian endemics were recorded, such as: *Atlapetes flaviceps* (Chapman, 1912), *Habia cristata* (Lawrence, 1875), and *Leptotila conoveri* (Bond & Meyer de Schauensee, 1943). Seven other species are semi-endemics, including: *Tangara vitriolina* (Cabanis, 1850), *Thamnophilus multistriatus* (Lafresnaye, 1844), and *Xenopipo flavicapilla* (Sclater, 1852) (Figure 2).

Twelve species that occurr at the Totare River Basin are cited in IUCN categories of threat (IUCN 2012). Of these, three are endangered: *A. flaviceps*, *Grallaria milleri* (Chapman, 1912), and *L. conoveri*. Five are vulnerable: *Anthocephala floriceps* (Golud, 1853), *Bolborhynchus ferrugineifrons* (Lawrence, 1880), *Contopus cooperi* (Nuttall, 1831), *Setophaga cerulea* (Wilson, 1810) and *Hapalopsittaca amazonina* (Des Murs 1845). Additionally, four species are near-threatened: *Andigena hypoglauca* (Gould, 1833), *Eriocnemis derbyi* (De Lattre & Bourcier, 1846), *Odontophorus hyperythrus* (Gould, 1858), and *Xenopipo flavicapilla* (Sclater, 1852).

The records of 14 species are additions to the known species composition in the Ibagué municipality (Table 3). Of these 10 are noteworthy records, which are new records for de Cordillera Central or new records of poorly known birds from Colombia or Tolima. Particularly noteworthy records are presented below:

Barred Forest Falcon (*Micrastur ruficollis* Vieillot, 1817) (Figure 3A). An adult was collected (CZUT-OR - 600) on February 2007 in the mature forest on the Ambala. Other individual was heard on May 2007 in an oak forest on the Palomar. These records represent the second record from the east slope of the Central Andes and the first confirmed record of this species in municipality of Ibagué (Hilty and Brown 1986, Freeman *et al.* 2012).

Golden-winged Manakin (*Masius chrysopterus* Lafresnaye, 1843) (Figure 3B). An adult was mist-netted and photographed on February 2007 in mature forest at 1800 m on the Amabala zona media. This record fills a gap between upper Magdalena Valley and northern end of the Cordillera Central (Hilty and Brown 1986). One specimen from municipality of Dolores but not previously reported in the literature was found in museum (CZUT-OR -0416).

Spotted Rail (*Pardirallus maculatus* Boddaert, 1783) (Figure 3C). This species was known in the Tolima from records at middle Magdalena Valley (Hilty and Brown 1986) and the record from Ibagué city in this study represents a minor range extension of 100 km.

Green-tailed Trainbearer (*Lesbia nuna* Lesson, 1832). This hummingbird was previously known from Cordillera Oriental and C. Central on the western slope in Cauca (Hilty and Brown 1986). Multiple observations in Ambala zona Alta and Clarita Botero represent the first records of the Green-tailed Trainbearer for the eastern slope of the Cordillera Central.

Streak-capped Treehunter (*Thripadectes virgaticeps* Lawrence, 1874). An adult was mist-netted and photographed on February 2007 in mature forest at 1800 m, on the Reserva Forestal Bella Vista (Amabala) and multiple observations from Clarita Botero. These records fill a gap between upper Magdalena Valley in the southern of the Cordillera Central (Huila department) and northern of the Cordillera Central (Antioquia department) (Hilty and Brown 1986; Cuervo *et al.* 2008 b).

Slaty-backed Nightingale-Thrush (*Catharus fuscater* Lafresnaye, 1845). This species was previously recorded in the Cordillera Central on the western slope in the departments of Caldas and Risaralda and on the northern end of the Cordillera Central in Antioquia (Beltrán and Kattan 2001; Cuervo *et al.*, 2008b). This forest thrush was mist-netted on May 2007 in disturbed forest at 2100 m on the Clarita Botero parte Alta. There is another recent record not published in the Combeima River Basin (CZUT-OR - 0043). These records are the first for the eastern slope of the Cordillera Central and fill a gap between upper Magdalena Valley and northern end of the Cordillera Central (Hilty and Brown 1986; Cuervo *et al.* 2008 b).

Pale-eyed Thrush *Turdus leucops* (Taczanowski, 1877). One specimen was collected (CZUT-OR 0523) on February 2007 in the Reserva Forestal Bella Vista. This specimen extends the known range of Pale-eyed Thrush from the northern end of the C.Central in Antioquia to upper Magdalena Valley in Tolima, being the first record from the east slope of the C. Central.

White-eared Conebill (*Conirostrum leucogenys* Lafresnaye, 1852). This species was recorded in the upper Magdalena valley in Villa-vieja to Garzón (Hilty and Brown

1986). My observations in the municipality of Piedras extend its distribution in the C. Central by 150 km (Hilty and Brown 1986).

I also documented 37 migratory species, of which eighty-three percent are Neotropical-Nearctic migrants, mainly Passeriformes. In general these birds were recorded in localities below 2100 m and median altitude of 1500 m in localities as Clarita Botero, Zona Urbana and Jardín Botánico San Jorge where there are shade coffee plantations. This explains the richness of migratory birds observed at these localities (Tejada-Cruz and Sutherland 2004; Bakermans et al. 2009).

Figure 2. Noteworthy bird species recorded in Totare River Basin, Tolima department, Colombia. A, *Atlapetes flaviceps*, an endangered and Colombian Central Andes endemic species; B, *Habia cristata*, Colombian Central and West Andes endemic species; C, *Leptotila conoveri*, an endangered and Colombian Central Andes endemic species; D, *Tangara vitriolina*; E, *Thamnophilus multistriatus*, and F, *Xenopipo flavicapilla* are Colombian semi-endemic species. Photos by Jorge Garcia-Melo.

Migratory species included some noteworthy records as Cerulean Warbler (*S. cerulean*) and Olive-sided Flycatcher (*C. cooperi*) are Neotropical migrant songbirds have undergone a moderately rapid decline, owing to continuing habitat loss and therefore qualifies as Vulnerable and Near Threatened respectively (IUCN 2012). Both species were recorded in shade coffee plantations in Ambala Zona Media and the city of Ibagué. The Sulphur-bellied Flycatcher (*Myiodynastes luteiventris* P. L. Sclater, 1859) is a short distance migrant that was observed in La Flor at 2100 m. This is one of the few records in the east slope of the Cordillera Central (Hilty and Brown 1986; Eusse-González 2012).

The bird species richness recorded in this study represents 81% (508) of the total number of species expected to be observed according to the Chao 2 species richness estimator and 79% (520) for the ICE species richness estimator. This difference is significant, indicating that the survey was insufficient and that the sampling effort was not enough for the recording of all species occurring in the area. The duplicates had a similar curve to the uniques, showed that have not monitored a sufficient number of individuals or repetitions. The accumulation curve of observed species (Sobs) showed a tendency to asymptote (Figure 4).

The richness varied between the localities and exhibited a mid-elevation peak, a pattern identified in tropical Andean species (Terborg 1977; McCain 2009) and particularly in the internal Andean slopes as the Magdalena valley (Kattan and Franco 2004). In the basin, the higher values of richness were between 1000 and 2000 m (Figure 5A), being Clarita Botero the locality with the most speices richness (191 species). This may be because Clarita Botero has major sampling effort, as was monitored for Parra-Hernandez *et al.*(2007) for two years (2004–2006). The poorest species locality was Estrella (19), owing probably to the low sampling effort, by *Paramo* habitat disturbance and the severe climatic conditions that restricted of the species distribution.

The NMDS analysis showed that the composition of species was clustered by altitude range in four groups (Figure 6). The first group was comprised of 10 localities located below 1500 m, which are highly impacted from human activities. The second group is formed by two mid-elevation localities having forest cover or which are connected to great forest patches. The three localities situated to 2100 m that have great forest patches and are connected to riparian forests make up the third grouping of localities. Finally, the last group includes localities in the Páramo ecosystem up to 3600 m. Palomar at 2800 m, was not grouped with others localities, because was the only locality situated between 2100 and 3600 m.

These localities associated by species composition are showing ecology affinities related with altitude, physical and ecological factors have played a prominent role in determining species diversity and its distribution

Figure 3. New and noteworthy bird species records from the Ibagué municipality, Tolima department, Colombia. A, *Micrastur ruficollis*; B, *Masius chrysopterus*; C, *Pardirallus maculatus*. Photos by Jorge Garcia-Melo.

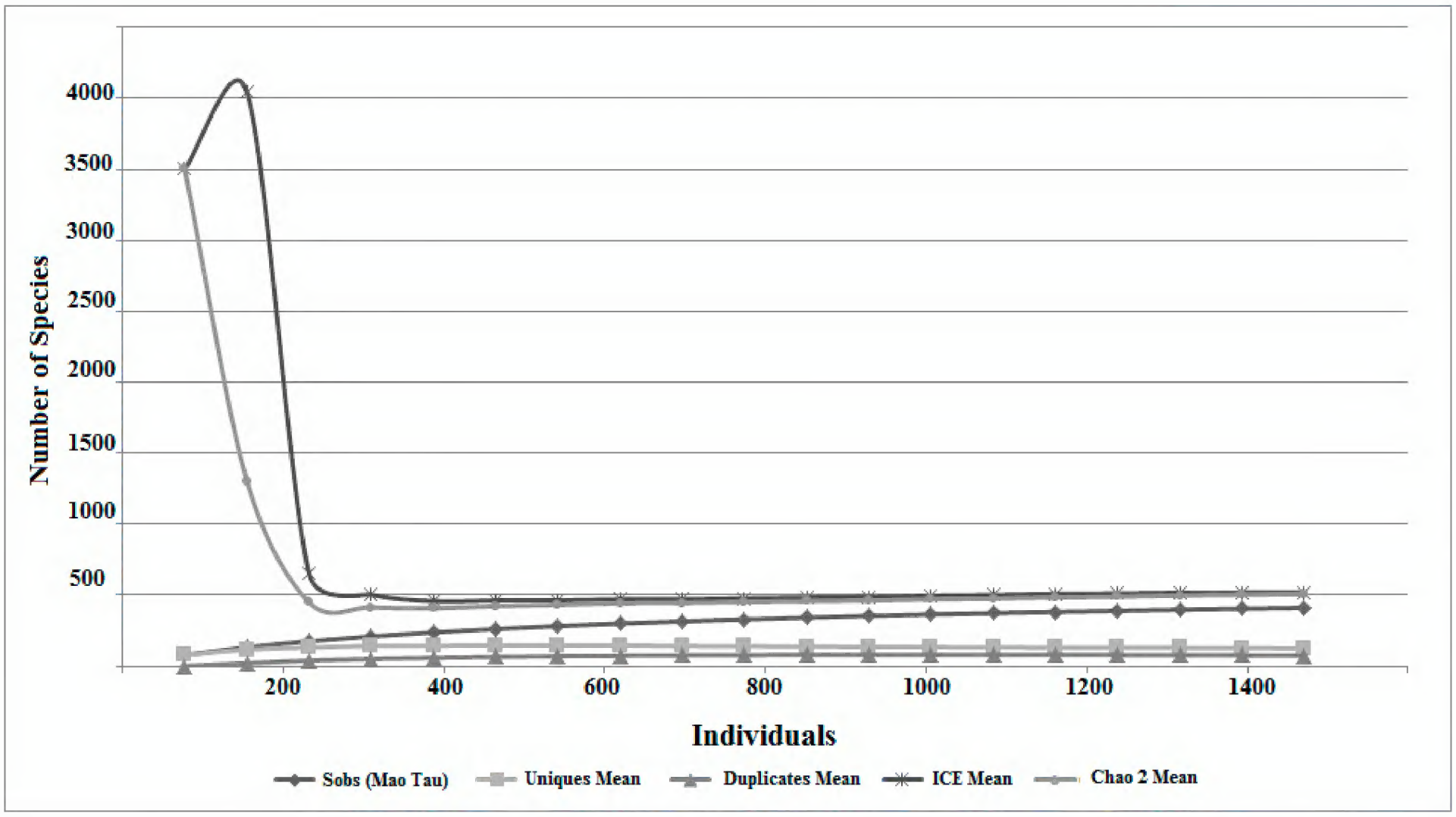

FIGURE 4. Non-parametric species richness estimators Chao 2 and ICE. Curves were based on bird species recorded at Totare River Basin, Tolima department, Colombia.

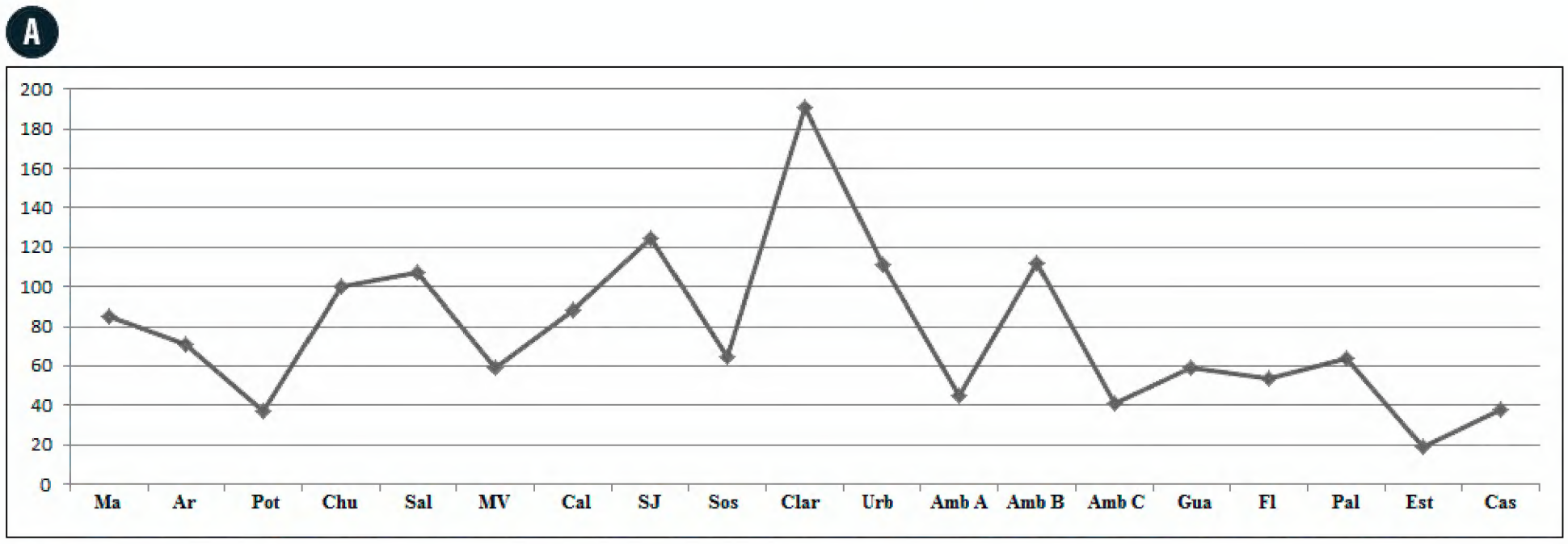

FIGURE 5. A, Species richness of birds from each locality in the Totare River Basin; B, endemic and semi-endemic especies, threatened species and migrant species of birds from each locality in the Totare River Basin. For the nomenclature see Table 1.

(Terborgh, 1977; Lomolino, 2001). I used the scores produced by the first NMDS axis to corroborate the relationship between the elevation and composition of birds, and I found a strong relationship (linear regression: $P<.0001$, $R^2 = 0.901$, df = 17).

These results show a high beta-diversity in the Totare River basin, due in part to the altitude variation, which together with human activities gives shape to landscape, a situation that has been found in other regions (Rahbek 1995, 1997; MacCain 2009; MacCain and Grytnes 2010; Marini *et al.* 2011).

Based only on the checklist, the priority localities for conservation would be Clarita Botero and Ambala, which present a higher number of endemic and threatened bird species (Figure 5B). Furthermore, Ambala has natural forests areas that are connected to larger forest fragments, and Clarita Botero is a locality that, despite having a severe human disturbance, has some forest fragments that are connected to forests at the Combeima River Basin. Both localities form an interconnection zone that is very important for maintenance of the connectivity process between bird populations of different basins; such characteristics allow the nomination of these two localities as potential areas to be declared IBAs (Important Bird Areas). Additionally, both localities have *restricted-range bird* species **(<=50.000KM²)** and the Northern Andes species, that comparated with other IBAs of the Tolima Departament, would represent areas with highest values of the endemic species, threatened species and restricted-range bird species (Franco *et al.* 2009). Besides the Palomar locality could be also important for conservation, because it harbors bird species of conservation concern in large areas of oak forests with zones that have not yet been explored. These zones are principally in highland areas where there is a constant threat due to the expansion of the agricultural frontier.

These results show the high diversity of the Totare River Basin, making it worthy of attention for conservation purposes and further studies; in addition, this basin presented larger numbers of species and more endemic species than other larger watersheds that had been studied with greater sampling efforts. For example, Losada *et al*. 2005 reported for the Coello watershed 389 species, and López-Lanus *et al.* 2000 reported for the Toche watershed 249 species. Other studies conducted in the region reported high richness with new and noteworthy records, for example Parra-Hernández *et al.*(2007) for the municipality of the Ibague, Losada and Molina-Martínez (2011) for The tropical dry forest life zone in the Tolima, besides the sporadic record (Freeman *et al.* 2011), which demonstrate that this region need more inventories and monitoring birds. Undoubtedly, additional inventories will add even more species to the list of those in the Totare River Basin. For example, very little is known about the central west area, especially the area between Palomar and Ambala Zona Alta.

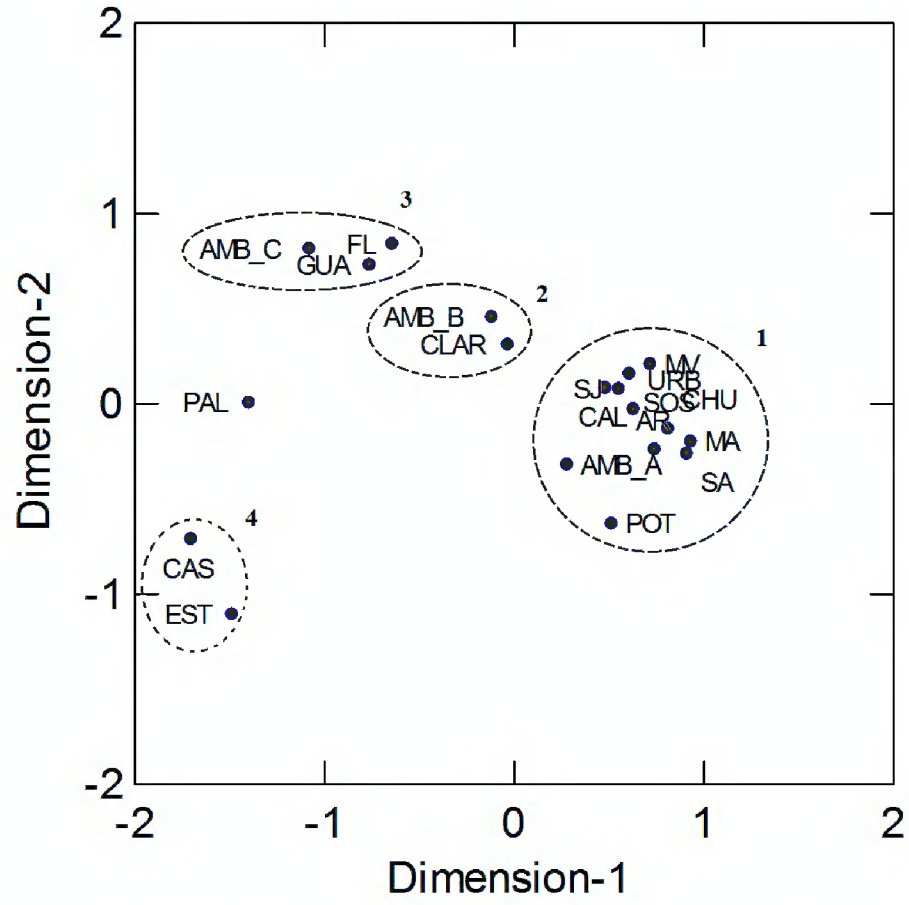

FIGURE 6. The NMDS analysis joining the localities in base of composition of bird species in the Totare River Basin, Tolima department, Colombia.

TABLE 2. Bird species recorded within the Totare River Basin, Tolima department, Colombia. Locality: (Ma) La Manga de los Rodríguez, (Ar) La Argelia, (Pot) Potrerito, (Chu) Chucuní, (Sa) Salado, (MV) Minas del Vergel, (Cal) Calambeo, (SJ) Jardín Botánico San Jorge,(Sos) Bosque del Colegio HG SOS, (Clar) Clarita Botero, (Urb) Zona Urbana, (Amb A) Ambala zona baja, (Amb B) Ambala zona media, (Amb C) Ambala zona Alta , (Gua) Guaimaral, (Fl) La Flor, (Pal) Palomar, (Cas) La Cascada, (Est) La Estrella. Habitat where the specie was detected: (ac) aquatic habitat, (bm) primary forest, (bb) forest edge, (bg) gallery forest, (bs) secondary forest, (ea) aerial, (mt) shrub, (p) grasslands, (vp) páramo vegetation, (ca) coffee-agricultural area, (zcu) area of cultivation and (zu) urban area. The column "source" lists the information gathered for each species as indicated: A = Field observations by the author. B = Species registered by Parra-Hernandez et al. 2007 within basin. The column "observation" lists information about the register type (e.g. photos, audio recordings, vouchers in the ornithological collection of the Tolima University), endemicity, conservation status and new reports for each species as indicated: Type of record = (Ra) Audio recordings, (V) Visual register, (Fo) Photographic register, (Ca) Register from captured. Additional evidence refer to particular information for each species such as: a) Number of the voucher in the Colección Zoológica Universidad del Tolima - Ornitologia = (CZUT - Or), b) Number of the audio recording deposited by the author in the collection of bird song Xeno-canto (http://www.xeno-canto.org) = (XC), c) Distribution information: (E) endemic, (S - end) semiendemic, (M) migrant, (RE) range extention, and (NR) New records for the Ibagué municipality, d) Conservation status: (CR)= Critically Endangered, (EN)=Endangered, (VU)=Vulnerable, and (NT)=Near Threatened.

TAXON	LOCALITY	ELEVATION (M A.S.L)	HABITAT	SOURCE	OBSERVATION
Tinamidae					
Nothocercus julius (Bonaparte 1984)	Clar	2000	Bm	B	(Ra, V)
Crypturellus soui (Hermann 1783)	Chu, Cal	750 - 1200	bs, bb	A	(Ra, V)
Anatidae					
Anas andium (Sclater & Salvin 1873)	Cas	3600	Ac	A	(V, Fo
Oxyura jamaicensis (Lehmann 1946)	Cas	3600	Ac	A	(V, Fo)
Cracidae					
Ortalis columbiana (Hellmayr 1906)	Sa, Chu, SJ, Clar	900 - 1800	bs, bg, bb	A,B	(V) E
Aburria aburri (Lesson 1828)	Amb B	1800	Bm	A	(V) NR, NT

Table 2. ***Continued.***

TAXON	LOCALITY	ELEVATION (M A.S.L)	HABITAT	SOURCE	OBSERVATION
Chamaepetes goudotii (Lesson 1828)	Gua, Fl, Pal	2100 - 2800	bm, bs	A	(V)
Odonthophoridae					
Colinus cristatus (Linnaeus 1766)	Sa, Ar, Cal, SJ	270 - 1200	mt, p	A,B	(V, Ra)
Odontophorus hyperythrus (Gould 1858)	Clar, Amb C	1800 - 2100	Bm	A,B	(V, Ra XC96070), E, NT
Podicipedidae					
Podylimbus podiceps (Linnaeus 1766)	Sa	900	Ac	B	(V)
Ardeidae					
Nycticorax nycticorax (Gmelin 1789)	Sa	900	Ac	B	(V)
Butorides striata (Linnaeus 1758)	Sa, Ma, Ar, SJ, Urb	270 - 1200	Ac	A,B	(V Fo)
Bubulcus ibis (Linnaeus 1758)	Ma, Ar, Chu, Cal, Urb	270 - 1200	p, zcu, zu	A,B	(V Fo)
Ardea alba (Linnnaeus 1758)	Sa, Ma	270 - 900	Ac	A,B	(V Fo)
Syrigma sibilatrix (Temminck 1824)	Sa	900	Ac	B	(V)
Pilherodius pileatus (Linnaeus 1758)	Sa, SJ, Ma	270 - 1200	Ac	A,B	(V Fo)
Egretta thula (Molina 1782)	Sa	900	Ac	A,B	(V Fo)
Threskiornithidae					
Phimosus infuscatus(Lond 1877)	Sa, Ma, Ar, Chu, MV, Cal, SJ, Clar, Urb	270 - 1200	Ac	A,B	(V Fo)
Cathartidae					
Coragyps atratus (Bechstein 1793)	Ma, Ar, Chu, Cal, Sos, Urb, Amb A - B - C, Gua, Fl	270 - 2100	Ea	A,B	(V Fo)
Cathartes aura (Linnaeus 1758)	Sa, Ma, Ar, Clar, MV, SJ, Sos, Clar, Urb, Amb B	270 - 1800	Ea	A,B	(V Fo)
Pandionidae					
Pandion haliaetus (Linnaeus 1758)	Sa, Urb	900 - 1000	ea, ac	A,B	(V Fo) M
Accipitridae					
Elanus leucurus (Vieillot 1818)	Sa, Ma, Ar, Chu, SJ, Urb, Gua	270 - 2100	pp, mt, zcu, zu	A,B	(V Fo)
Gampsonyx swainsonii (Vigor 1825)	Ar, SJ, Sos	310 - 1200	bb, p, zcu	A,B	(V Fo)
Harpagus bidentatus (Latham 1790)	Gua	2100	Bb	A	(V)
Buteogallus meridionalis(Latham 1790)	Ma	270	p, mt, zcu	A	(V)
Rupornis magnirostris (Gmelin 1788)	Sa, Ma, Ar, Pot, Chu, MV, Cal, SJ, Sos, Clar, Urb, Amb A - B, Gua, Pal	270 - 2800	bs, bb, p, mt, zcu, zu	A,B	(V Fo Ra)
Buteo platypterus (Vieillot 1823)	Sa, Cal, SJ, Clar, Urb	900 - 2000	bm, bs, bb, ea	A,B	(V) M
Buteo brachyurus(Viellot 1816)	Sa	900	b bs za	B	(V)
Buteo swainsoni (Bonaparte 1838)	SJ, Clar, Urb	1200 - 2000	bm, bs, bb, ea	A,B	(V) M
Rallidae					
Anurolimnas viridis (Statius Muller 1776)	Urb	1200	Ac	B	(CZUT - Or 198, V)
Aramides cajaneus (Müller 1776)	Sa, Ma, Pot, MV, Cal, SJ, Urb, Amb A	270 - 1500	Ac	A,B	(V, Ra)
Pardirallus maculatus (Boddaert 1783)	Urb	1200	Ac	A	(V, Fo) RE NR
Porphyrio martinicus (Linnaeus 1766)	Sa, Urb	900 - 1200	Ac	A,B	(V, Fo)
Gallinula galeata (Linnaeus 1758)	Sa	900	Ac	B	(V) M
Fulica ardesiaca (Tschudi 1843)	Cas	900	Ac	A	(V, Fo)
Charadriidae					
Vanellus chilensis (Molina 1782)	Sa, Ma, Ar, Pot, Chu, MV, Cal, SJ, Clar, Urb, Pal	270 - 2100	ac, p, zu	A,B	(V, Fo, Ra)
Vanellus resplendens (Tschudi 1843)	Pal	2800	ac, p	A	(V)
Charadrius collaris (Vieillot 1818)	Sa	900	Ac	B	(V)
Scolopacidae					
Gallinago nobilis (Sclater 1856)	Cas	3600	Ac	A	(V)
Actitis macularius (Linnaeus 1766)	Sa	900	ac	B	(V) M
Tringa solitaria (Wilson 1813)	Sa	900	Ac	B	(V) M
Jacanidae					
Jacana jacana (Linnaeus 1766)	Sa, Ma, Cal, SJ	270 - 1200	Ac	A,B	(V Fo)
Columbidae					
Columbina passerina (Bonaparte 1855)	Sa, Chu	750 - 900	p, mt, bb	B	(V)
Columbina talpacoti (Temminck 1810)	Sa, Am, Ar, pot, Chu, MV, Cal, SJ, Sos, Clar, Urb, Amb A - B, Fl	270 - 2100	p, mt, bb, ca	A,B	(CZUT - Or 518)
Columba livia (Gmelin 1789)	Cal, Clar, Urb, Amb A - B - C	1200 - 2100	Zu	A,B	(V Fo)
Claravis pretiosa (Ferrari-Perez 1886)	Ma	270	bs, bg, bb	A	(V Fo)
Patagioenas fasciata (Say 1823)	Amb B - C, Gua, Fl, Pal, Cas	1800 - 3600	bm, bs, bb	A	(V)
Patagioenas cayennensis (Bonnaterre 1792)	Sa	900	bs, bg, mt	B	(V)
Patagioenas subvinacea (Lawrence 1865)	Amb B	1800	bm, bs,bb	A	(V)
Zenaida auriculata (Bonaparte 1855)	Sa, Ma, Ar, Chu, Cal, SJ, Sos, Clar, Urb	270 - 1200	bs,bb, p, mt, zcu, zu, ca	A,B	(V, Fo)

Table 2. ***Continued.***

TAXON	LOCALITY	ELEVATION (M A.S.L)	HABITAT	SOURCE	OBSERVATION
Leptotila verreauxi (Bonaparte 1855)	Sa, Ma, Ar, Chu, MV, SJ	270 - 1200	bs, bb, ca	A,B	(V, Fo)
Leptotila conoveri (Bond & Meyer de Schauensee 1943)	Clar, Amb B	1400 - 1800	bm, bs, bb, ca	A,B	(CZUT - Or 524) E EN
Cuculidae					
Coccycua minuta (Vieillot 1817)	Chu	750	bs, bg	A	(V, Fo)
Coccycua pumila (Strickland 1852)	Sa, Urb	900 - 1200	bs, mt, zu	A,B	(V)
Piaya cayana (Bonaparte 1850)	Sa, Ar, Cal, SJ, Clar, Amb B, Gua	310 - 2100	bs, bg, bb	A,B	(V, Fo)
Coccyzus americanus (Linnaeus 1758)	Cal, SJ, Urb	1200	bs, zu	A,B	(V) M
Crotophaga major (Gmelin 1788)	Sa, Ma, Ar, Pot, Chu, Urb	270 - 1200	bs, bb, mt	A,B	(V, Fo)
Crotophaga ani (Linnaeus 1758)	Sa, Ma, Ar, Pot, Chu, MV, Cal, SJ, Sos, Clar, Urb, Gua, Fl	270 - 2100	p, mt, zcu, zu	A,B	(V, Fo)
Crotophaga sulcirostris (Swainson 1827)	Sa, Ma, Ar, Chu, Urb, Gua, Fl	270 - 2100	p, mt, zcu, zu	A,B	(V, Fo)
Tapera naevia (Linnaeus 1766)	Sa, Cal, SJ, Amb A	900 - 1500	p, mt	A,B	(V, Fo)
Tytonidae					
Tyto alba (Scopoli 1769)	Sos, Urb	1200	bs, zu	A,B	(V, Ra)
Strigidae					
Megascops choliba (Vieillot 1817)	Ma, Chu, Urb, Fl	270 - 2100	bs, bg, zu, zcu	A,B	(V, Ra, Fo)
Pseudoscops clamator (Schlegel 1862)	Amb A	1500	bs, bb	A	(Ra)
Asio stygius (Wagler 1832)	Sos, Clar, Urb	1200	bs, bb, zu	A,B	(V, Ra)
Asio flameus (Pontoppidan 1763)	SJ, Urb	1200	bs, bb, zu	A,B	(V, Ra)
Nyctibiidae					
Nyctibius griseus (Gmelin 1789)	Ar, Chu, MV, Urb	310 - 1200	bs, bg, bb	A,B	(V, Ra, Fo)
Caprimulgidae					
Chordeiles minor (Forster 1771)	Ma, Ar, MV	270 - 1200	bs, bb, p, mt, zu	A,B	(V, Ra) M
Nyctidromus albicollis (Gmelin 1789)	Sa, Chu, MV, Clar, Urb	750 - 1200	bb, mt, p, zu	A,B	(V, Ra XC96383; CZUT-Or 22)
Systellura longirostris (Bonaparte 1825)	Amb C	2100	bs, p, vp	A	(Ra)
Apodidae					
Cypseloides cherriei (Ridgway, 1893)	Urb	1200	Zu	A	(V, CZUT - Or 0436)
Streptoprocne rutila (Vieillot 1817)	SJ, Fl	1200 - 2100	p, ea	A,B	(V)
Streptoprocne zonaris (Shaw 1796)	Sa, MV, SJ, Clar, Urb, Amb B, Gua	900 - 2100	bm, bs, ea	A,B	(V)
Trochilidae					
Eutoxeres aquila (Bourcier 1847)	Clar, Amb B, Gua, Fl	2000 - 2100	bm, bs, bb, ca	A,B	(V, CZUT - Or 484)
Glaucis hirsutus (Gmelin 1788)	SJ	1200	bs, bg, mt	B	(V, Fo)
Phaethornis anthophilus (Bourcier 1843)	Ma, Chu	270 - 750	bs, bg, mt	A	(V, Fo, CZUT - Or 493)
Phaethornis guy (Lesson 1833)	Ar, Cal, SJ, Clar, Amb A - B	310 - 1800	bs, bg, bb	A,B	(V, CZUT - Or 0531)
Phaethornis syrmatophorus (Gould 1851)	Chu, SJ, Clar, Amb B, Pal	750 - 2800	bm, bs, bb	A,B	(V, Ra, CZUT - Or 0532)
Doryfera ludovicae (Bourcier & Mulsant 1847)	Amb B	1800	bm, bs, bb	A	(Ca, V)
Florisuga mellivora (Linnaeus 1758)	Sa, SJ, Clar	900 - 1800	bs, bg, bb	A,B	(V)
Colibri thalassinus (Swainson 1827)	Clar, Amb C, Gua	1800 - 2100	bs, bb, p, zcu	A,B	(V, Ra)
Colibri coruscans (Gould 1846)	Clar, Fl, Pal	2100 - 2800	bs, bb, p, zcu	A,B	(V, Ra XC96287)
Anthracothorax nigricollis (Vieillot 1817)	Sa, MV, Cal, SJ, Sos, Clar, Urb	900 - 1200	bs, bb, mt, zu, zcu	A,B	(V)
Chlorostilbon gibsoni (Fraser1840)	SJ, Clar	1200	bs, bg, zcu	B	(V, Ca, Fo) C - end
Chlorostilbon mellisugus (Linnaeus 1758)	Sa, SJ, Clar, Amb B	900 - 1800	bs, bb, mt	A,B	(V)
Thalurania colombica (Bourcier 1843)	Chu, Sos, Clar, Amb, Pot B	750 - 1800	bm, bs, bb	A,B	(V,CZUT - Or 530)
Damophila julie (Bourcier 1842)	Chu, MV, SJ, Clar	750 - 2000	bm, bs, bg, bb	A	(V, Ca)
Amazilia franciae (Bourcier & Mulsant 1846)	Clar	2000	bb, bs	A	(V, Ca)
Amazilia tzacatl (de la Llave 1833)	Sa, Pot, MV, Cal, SJ, Sos, Clar, Urb	700 - 1800	bs, bg, bb, zu, zcu, ca	A,B	(V, Ca)
Amazilia amabilis (Gould 1853)	Clar	1800	Bs	B	(V, Ca, Fo)
Amazilia cyanifrons (Bourcier 1843)	SJ, Clar	1200 - 1800	bs, bb, mt	A,B	(V, Ca) E
Anthocephala floriceps (Golud 1853)	Clar	1800	bs, bb, zcu	A,B	(V, Ca) E VU
Chalybura buffonii (Lesson 1832)	Pot, MV, Cal, SJ, Sos, Clar, Urb, Amb B	700 - 1800	bs, bg, bb, zcu, zu	A,B	(V, Ca)
Adelomyia melanogenys (Fraser 1840)	Clar, Amb B - C, Gua, Fl, Pal	1800 - 2800	bm, bb	A,B	(V, Ca)
Heliodoxa rubinoides (Bourcier & Mulsant 1846)	Amb B	1800	bm, bb	A	(V, Ca)
Boissonneaua flavescens (Loddiges 1832)	Clar, Amb C	2100	bm, bb	A,B	(V, CZUT - Or 488)
Aglaeactis cupripennis (Bourcier 1843)	Est	3600	Vp	A	(V)
Lafresnaya lafresnayi (Boussonneau 1840)	Clar	1800 - 2000	bs, bb	A,B	(V, Ca, Fo)

Table 2. C*ontinued.*

TAXON	LOCALITY	ELEVATION (M A.S.L)	HABITAT	SOURCE	OBSERVATION
Coeligena coeligena (Lesson 1833)	Clar, Amb B, Gua, Pal	1800 - 2800	bm, bb	A,B	(V, CZUT - Or 492)
Coeligena torquata (Boissonneau 1840)	Clar, Amb B, Gua, Pal	1800 - 2800	bm, bg, bs, bb	A,B	(V, CZUT - Or 470)
Coeligena lutetiae (De lattre & Bourcier 1846)	Pal	2800	Bm	A	(CZUT - Or 542)
Ensifera ensifera (Boissonneau 1840)	Pal, Cas	2100 - 2800	bs, bb, bg, zcu	A	(V)
Heliangelus exortis (Fraser 1840)	Clar, Pal	1800 - 2800	bs, bb	A,B	(Ca,V)
Eriocnemis derbyi (De lattre & Bourcier 1846)	Cas	3600	bm, vp	A	(V) S - end NT
Eriocnemis mosquera (De lattre & Bourcier 1846)	Cas	3600	bm, vp	A	(V) C - end
Chrysolampis mosquitus (Linnaeus 1758)	Chu	700	bs, bb, bg, zcu	B	(V, ca, Fo)
Haplophaedia aureliae (Bourcier & Mulsant 1846)	Clar, Amb B, Gua	1800 - 2100	bm, bb	A,B	(Ca,V)
Ocreatus underwoodii (Lesson 1842)	Clar, Amb B, Fl	1800 - 2100	bm, bs, bb	A,B	(Ca, V)
*Lesbia nuna (*Lesson 1832)	Amb C	2100	bs, bb	A	(V) RE NR
Ramphomicron microrhynchum (Boissonneau 1840)	Pal	2800	bm, vp	A	(V)
Metallura tyrianthina (Loddiges 1832)	Pal, Est	2800 - 3600	bm, bb, vp, mt	A	(V, Ca)
Schistes geoffroyi (Bourcier 1843)	Clar	1800	bs, bb, zcu	A	(V)
Chaetocercus mulsant (Bourcier 1842)	Clar, Amb A	1400 - 1600	bb, zcu	A,B	(V)
Trogonidae					
Trogon personatus (Gould 1842)	Clar, Amb B, Pal	1800 - 2800	bm, bs, bb	A,B	(V, Ra, Fo XC96493)
Alcedinidae					
Megaceryle torquata (Linnaeus 1766)	Sa, Ma	270 - 900	Ac	A,B	(V, Ra, Fo)
Chloroceryle amazona (Latha 1790)	Sa, Ma	270 - 900	Ac	A,B	(V, Ra, Fo)
Chloroceryle americana (Gmelin 1788)	Sa, Ma, SJ	270 - 1200	Ac	A,B	(V, Ra, Fo)
Momotidae					
Momotus aequatorialis (Gould, 1858)	MV, Cal, SJ, Sos, Clar, Amb B, Gua, Fl	1200 - 2100	bm, bs, bb, bg	A,B	(V, Ra XC96317, CZUT - Or 474)
Momotus subrufescens (P. L. Sclater, 1853)	Sa, Ar, Chu	270 - 900	bm, bs, bb, bg	A,B	(V, Ra, Ca)
Galbulidae					
Galbula ruficauda (Cuvier 1817)	Sa, Ma, Ar, Chu, MV	270 - 1200	bs, bg, bb, mt, p	A,B	(V, Fo, XC96491)
Bucconidae					
Malacoptila mystacalis (Lafresnayi 1850)	MV, Clar, Amb B	1200 - 1800	bm, bb	A,B	(V, Fo, Ca)
Ramphastidae					
Aulacorhynchus prasinus (Gold 1834)	Clar, Amb B, Gua, Fl, Pal	1800 - 2800	bm, bs, bg, bb	A,B	(V, Ra XC95833)
Aulacorhynchus haematopygus (Gould 1835)	Clar, Amb B	1800	bm, bs, bb	A,B	(V, Ra)
Andigena hypoglauca (Gould 1833)	Cas	3600	bm, bb	A	(V, Fo) NT
Picidae					
Picumnus olivaceus (Lafresnaye 1845)	Sa, Ma, Ar, Chu, MV, Cal, SJ, Sos, Clar, Urb - Urb	270 - 1200	bs, bb, mt, p	A,B	(V)
Melanerpes formicivorus (Swainson 1827)	Clar, Pal	1800 - 2800	bs, bb, pp	A,B	(V, Ra XC96320)
Melanerpes rubricapillus (Cabanis 1862)	Sa, Mam Ar, Pot, Chu, MV, Cal, SJ, Sos, Clar, Amb A - B	270 - 1800	bs, bb, bg,zcu, zu	A,B	(V, Ra, Ca, Fo)
Veniliornis kirkii (Malherbe 1845)	Ar, Chu, Cal, Clar	310 - 1800	bs, bb, mt	A,B	(V, Ca)
Colaptes rubiginosus (Swainson 1820)	Amb B	1800	bm, bs	A	(V)
Colaptes rivolii (Boissonneau 1840)	Clar, Amb B - C, Gua, Cas, Est	1800 - 3600	bm, bs, bb	A,B	(V, Ra XC96279)
Colaptes punctigula (Short 1972)	Sa, Chu, Cal, SJ, Sos, Clar, Urb	750 - 1200	bs, bg, bb, mt	A,B	(V, CZUT - Or 490)
Dryocopus lineatus (Linnaeus 1766)	Ma	270	bs, bg, bb, mt, p	A	(V)
Campephilus melanoleucos (Gmelin 1788)	Sa, Fl	2100	bm,bs, bb	A	(V)
Falconidae					
Caracara cheriway (Cassin 1865)	Sa, Ma, Clar, Fl	270 - 2100	p, mt,zcu, zu	A,B	(V Fo)
Milvago chimachima (Viellot 1816)	Sa, Ma, Ar Chu, MV, Cal, SJ, Sos, Urb	270 - 1200	p, mt,zcu, zu	A,B	(V Fo Ra)
Micrastur ruficollis (Vieillot 1817)	Amb B, Pal	1800 - 2800	Bm	A	(CZUT - Or 600, Fo, Ra) RE NR
Falco sparverius (Linnaeus 1758)	Sa, Ma, Ar, Pot, SJ, Clar, Urb, Gua, Fl, Pal	270 - 2800	p, mt, zcu	A,B	(V, Fo Ra)
Falco femoralis (Temminck, 1822)	Sa, SJ, Urb	900 - 1200	p, mt, zu	A,B	(V)
Falco peregrinus (Tunstall 1771)	MV, Urb	1200	p, mt, zu	B	(V) M
Psittacidae					
Psittacara wagleri (Gray 1845)	Sa, Chu, Urb	750 - 1200	bs, ea, zu	B	(V)
Eupsittula pertinax (Linnaeus 1758)	Sa, MV, SJ, Urb	900 - 1200	bs, ea, zu	A, B	(V)
Bolborhynchus ferrugineifrons (Lawrence 1880)	Cas	3600	Vp	A	(V, Fo) E VU
Forpus conspicillatus (Lafresnaye 1848)	Sa, Ma, Ar, Potm Chu, MV, Cal, SJ, Clar, Urb, Amb A - B	270 - 1800	p, mt, bs, zu, zcu, ca	A,B	(V, Fo)

Table 2. *Continued.*

TAXON	LOCALITY	ELEVATION (M A.S.L)	HABITAT	SOURCE	OBSERVATION
Brotogeris jugularis (Müller 1776)	Sa, Ar, Pot, Chu, MV, Cal, SJ, Sos, Clar, Urb, Amb A	310 – 1500	p, mt, bs, zu, zcu, ca	A,B	(V, Fo)
Hapalopsittaca amazonina (Des Murs 1845)	Pal	2800	Bm	A	(V) VU
Amazona ochrocephala (Cabanis 1874)	Sa, Ma, Ar, Chu	270 – 900	bs, bb, p	A,B	(V, Fo)
Amazona mercenarius (Tschudi 1844)	Pal	270 – 900	bm, bs, bb	A	(V)
Furnariidae					
Cinclodes excelsior (Sclater 1860)	Est	3600	vp, p	A	(V, Fo)
Synallaxis azarae (Chapman 1914)	Clar, Amb B - C, Gua, Fl	1600 - 2100	mt, bb	A,B	(V, Ra, Ca)
Synallaxis albescens (Temminck 1823)	Sa, Ma, Cal, Urb	270 - 1200	mt, bb	A,B	(V, Ra, Ca)
Synallaxis unirufa (Lafresnaye 1843)	Cas	3600	bm, bb	A	(V)
Synallaxis brachyura (Lafresnaye 1843)	Ar, Cal, Clar, Amb A - B	310 - 1800	bb, mt, ca	A,B	(V, Ra)
Certhiaxis cinnamomeus (Gmelin 1788)	Ma	270	Ac	A	(V)
Asthenes flammulata (Jardine 1850)	Gua	2100	bm, bb	A	(Ca,V)
Premnornis guttuliger (Sclater 1864)	Amb B	1800	bm, bs, bb	A	(V)
Premnoplex brunnescens (Sclater 1856)	Clar, Amb B, Gua	1800 - 2100	bm, bg, bb	A,B	(V, CZUT - Or 469
Margarornis squamiger (d´Orbigny & Lafrenayi 1838)	Clar, Amb B, Pal, Cas	1800 - 3600	bm, bb	A,B	(V, CZUT - Or 506)
Pseudocolaptes boissonneautii (Lafresnaye 1840)	Clar, Amb B, Pal, Cas	1800 - 3600	bm, bb	A,B	(V, Ca)
Anabacerthia striaticollis (Lafresnaye 1842)	Clar, Amb B, Gua, Fl	1800 - 2100	bm, bb	A,B	(V, Ca)
Thripadectes holostictus (Sclater & Salvin 1875)	Amb B	1800	Bm	A	(V, Ca)
Thripadectes virgaticeps (Lawrence, 1874)	Clar, Amb B	1800	Bm	A	(V, Ca, Fo) RE NR
Lochmias nematura (Lichtenstein 1823)	Amb B	1800	bm, bs, bg	A	(Fo, Ca, CZUT - Or 516)
Xenops rutilans (Teminck 1821)	Amb B, Gua, Fl	1800 - 2100	bs, bb	A	(V)
Dendrocincla tyrannina (Lafrenaye 1845)	Pal	2800	bm, bb	A	(CZUT - Or 527)
Dendrocincla fuliginosa (Vieillot 1818)	SJ	1200	bs, mt	B	(V)
Xiphocolaptes promeropirhynchus (Lesson 1840)	Pal	2800	bm, bb	A	(V)
Dendrocolaptes picumnus multistrigatus (Linchtenstein 1820)	Pal	2800	bm, bb	A	(V, CZUT - Or 521)
Dendroplex picus (Fylon 1851)	Ma, Ar, MV, Cal, SJ, Clar, Urb	270 - 1200	bs, bb, zu	A,B	(V, Ca, Ra, Fo)
Xiphorhynchus triangularis	Chu	750	bs, bg	A	(Ca, Fo) NR
Lepidocolaptes lacrymiger (Des Murs 1849)	Clar, Gua, Fl, Pal	1400 - 2800	bs, bb	A,B	(V)
Campylorhamphus trochilirostris (Chapman 1889)	Chu, Urb, Amb A	750 - 1500	bs, bb, bg, zu	A,B	(V, Ra)
Thamnophilidae					
Thamnophilus doliatus (Lawrence 1865)	Sa, Ma, Ar, Chu, Cal, SJ, Sos, Clar, Urb, Amb A	270 - 1500	bs, bb, mt, p, zu, zcu	A,B	(V, Ra)
Thamnophilus multistriatus (Lafresnaye 1844)	Cal, Clar, Amb B, Fl	1200 - 2100	bs, bb, ca	A,B	(V, Ra) S - end
Thamnophilus atrinucha atrinucha (Salvin & Godman 1892)	Chu, SJ, Sos	750 - 1200	bs, bb	A,B	(V, Ra)
Dysithamnus mentalis (Temminck 1823)	SJ, Clar, Amb B, Fl	1200 - 2100	bm, bb	A,B	(V, Ca, Ra)
Dysithamnus leucostictus (Sclater, 1858)	Amb B	1800	Bm	A	(Ca) RE NR
Epinecrophylla fulviventris (Lawrence 1862)	Cal, SJ, Clar	1200	mt, bb	A,B	(V, Ra)
Formicivora grisea (Canabis 1847)	Ma, Ar, Chu	270 - 900	bb, mt, p	A,B	(V, Ca, Ra XC96278)
Cercomacra tyrannina (Sclater 1855)	Pot, Chu	700 - 750	bs, bb , bg	A	(V, Ra, Fo; CZUT - Or 500)
Myrmeciza longipes boucardi (Swainson 1825)	Sa, Ma, Ar, Chu, MV, SJ, Urb	270 - 1200	bs, bb	A,B	(V, Ca, Ra, CZUT - Or 520)
Myrmeciza immaculata (Lafresnaye 1843)	SJ, Amb B	1200 - 1800	Bm	A,B	(V, Ra, Ca)
Grallariidae					
Grallaria squamigera (Prevost & Des Murs 1846)	Gua, Pal	2100 - 2800	Bm	A	(Ra)
Grallaria ruficapilla (Lafresnaye 1842)	Clar, Amb B - C, Gua, Fl	1600 - 2100	bm, bs, bb	A	(V, Ca, Fo,Ra XC96276)
Grallaria nuchalis (Sclater 1859)	Pal	2800	Bm	A	(Ra XC96504)
Grallaria quitensis (Lesson 1844)	Fl, Cas, Est	2100 - 3600	mt, vp	A	(V, Ra XC96374)
Grallaria milleri (Chapman 1912)	Clar, Amb C	1800 - 2100	bm, bb	A,B	(Ra) E EN
Grallaricula nana (Lafrenaye 1842)	Pal	2800	bm, bb	A	(Ra)
Rhinocryptidae					
Myornis senilis (Lafresnaye 1940)	Pal	2800	bm, bb	A	(RaXC96508)
Scytalopus atratus confusus (Hellmayr 1922)	Clar, Amb B	1800	bm, bb	A,B	(Ra XC96349)
Scytalopus spillmanni (Bangs, 1899)	Clar, Amb C, Pal	2100 - 2800	bm, bb	A	(Ra XC96475)
Acropternis orthonyx (Lafresnaye 1843)	Pal, Est	2800 - 3600	Vp	A	(Ra XC96366)
Tyrannidae					
Phyllomyias griseiceps(P. L. Sclater & Salvin, 1871)	Clar	1600	bb, mat	A	(V, Ra) NR

Table 2. *Continued.*

TAXON	LOCALITY	ELEVATION (M A.S.L)	HABITAT	SOURCE	OBSERVATION
Tyrannulus elatus (Latham 1790)	Chu, MV	1200	Bb	A,B	(V, Ra, Fo)
Myiopagis viridicata (Vieillot 1817)	Ma, SJ	270 - 1200	bs, bb, mt	A,B	(V, Ca, Fo)
Elaenia flavogaster (Thunberg 1822)	Sa, Ma, Ar, Chu, Cal, Sos, Clar, Urb	270 - 1200	mt, p, zu, zcu	A,B	(V, Ca, Fo, Ra)
Elaenia parvirostris (Pelzeln 1868)	Pot, Sos	700 - 1200	bs, mt, zu	A	(V, Ca, Fo) M
Elaenia Chiriquensis (Lawrence 1865)	Cal, SJ	1200	bs, mt, p	A,B	(V, Ca, Fo)
Elaenia frantzii (Lawrence 1865)	Clar, b, Gua, Fl	1800 - 2100	bs, bb, zcu	A,B	(V, Ra, Ca)
Camptostoma obsoletum (Temminck 1824)	Pot, SJ	700 - 1200	bs, bb	A,B	(V, Ra)
Mecocerculus leucophrys (Orbigny & Lafresnaye 1837)	Clar, Pal, Cas, Est	1800 - 3600	bm, bb, bs, vp	A,B	(V Ra XC96385)
Mecocerculus minor (Taczanowsky 1879)	Pal	2800	bm, bb	A	(V)
Phaeomyias murina (Spix 1825)	Sa, Ar, Chu, SJ	310 - 1200	Bg	A,B	(V, Ca, Fo)
Pseudocolapteryx acutipenis (Sclater & Salvin 1873	SJ	1200	Bs	B	(V)
Euscarthmus meloryphus (Wied-Neuwied 1831)	Chu	540 - 640	bs, mt	B	(V, Ca, Fo)
Zimmerius chrysops (Harter & GoodSaladon 1917)	MV, Clar, AmbA - B	1200 - 1800	bs, bb, mt	A,B	(V, Ra)
Phylloscartes ophthalmicus (Taczanowsky 1874)	SJ	1200	bm, bs	B	(V)
Phylloscartes poecilotis (Sclater 1862)	Amb B	1800	Bm	A	(V)
Mionectes striaticollis (Orbingy y Lafresnaye 1837	SJ, Clar, Gua, Fl, Pal	1200 - 2800	bm, bb	A,B	(V, Ca, CZUT - Or 471, 472)
Mionectes oleagineus (Lichtenstein 1823)	Pot, Chu, MV, SJ, Sos	700 - 1200	bs	A,B	(V, Ca, CZUT - Or 475, 486)
Leptopogon amaurocephalus(Tschudi 1846)	Chu	750	Bg	A	(Ca, Fo, CZUT - Or 491)
Leptopogon superciliaris (Tschudi 1844)	SJ	1200	Bs	B	(V, Ra)
Lophotriccus pileatus (Tschudi 1844)	SJ, Clar, Amb B, Fl	1200 - 2100	bm, bs	A,B	(V, Ra, Ca, Fo)
Hemitriccus margaritaceiventer (d' Orbigny & Lafresnaye 1837)	Ma, Ar, Chu	270 - 750	bs, bb, mt	A	(V, Ra, Ca)
Poecilotriccus ruficeps (Kaup 1852)	Amb C	2100	Bm	A	(V, Ra)
Todirostrum cinereum (Linnaeus 1766)	Sa, Ma, Ar, Pot, Chu, MV, Cal, SJ, Clar, Urb, Amb A	270 - 1500	bs, bg, bb, zu, zcu, ca	A,B	(V, Ra, Ca)
Tolmomyias sulphurescens (Spix 1825)	Ma, Chu, SJ	270 - 1200	Bs	A,B	(V, Ra, Ca)
Myiophobus flavicans (Sclater 1860)	Amb C	2100	Bm	A	(V, Ca)
Myiophobus fasciatus (Muller 1776)	Chu, Cal	1200	bb, mt, p	A,B	(V, Ca, Fo)
Pyrrhomyias cinnamomea (d´ Orbigny & Lafresnaye 1837)	Cal, Amb C, Gua, Fl, Pal	2100 - 2800	bm, bb	A	(V, Ra XC96388)
Cnemotriccus fuscatus (Leotaud 1866)	Ma, Ar	27o - 310	bs, bb	A	(V, Ca, Fo, CZUT - Or 483, 510, 513)
Empidonax virescens (Vieillot 1818)	Ma, Chu, Clar, Urb	270 - 1200	bs, bb, zu	A,B	(Ra, V) M
Empidonax traillii (Audubon 1828)	Clar, Urb	1200	bb, zu	A,B	(Ra, V) M
Contopus cooperi (Nuttall, 1831)	Amb B - C	1800 - 2100	Bb	A	(V) NR NT M
Contopus fumigatus (Orbigny & Lafresnaye 1837)	Amb C, Gua, Gua, Fl, Pal	2100 - 2800	Bb	A	(V, Ra XC96386)
Contopus virens (Linnaeus 1766)	Chu, SJ, Urb	750 - 1200	bs, bb, zu	A,B	(Ra, V) M
Sayornis nigricans (Swainson 1827)	Pot, Cal, SJ, Urb	750 - 1200	Ac	A,B	(V)
Pyrocephalus rubinus (Boddaert 1783)	Ma, Chu, SJ, Sos, Clar, Urb	270 - 1200	mt, p, zu, zcu	A,B	(V)
Knipolegus poecilurus (Sclater 1862)	Clar	2000	bb, mt	B	(V, Ca, Fo)
Myiotheretes striaticollis (Sclater 1853)	Cas, Est	3600	bs, p	A	(V)
Fluvicola pica (Boddaert 1783)	Sa, Ma, Ar, Chu	270 - 900	ac	A,B	(V, Ca, Fo, CZUT - Or 476)
Ochthoeca rufipectoralis (d´Orbigny & Lafresnaye 1837)	Pal	2800	bb, mt	A	(V)
Ochthoeca cinnamomeiventris (Lafresnaye 1843)	Clar, Amb B, Gua, Pal, Est	1800 -. 3600	bg, bb	A	(V, Ra, Ca, CZUT - Or 525)
Ochthoeca fumicolor (Sclater 1856)	Cas	3600	bb, mt, vp	A	(V)
Machetornis rixosa (Vieillot 1819)	Sa, MV, Cal, SJ, Urb	900 - 1200	p, zu	A,B	(V, Fo)
Legatus leucophaius (Viellot 1818)	SJ	1200	bs, zcu	B	(V)
Myiozetetes cayanensis (Linnaeus 1766)	Sa, Ar, Chu, Cal, Urb, Amb B	310 - 1200	bg, bb, mt, p, zu, zcu	A,B	(V, Ra)
Myiozetetes similis (Spix 1825)	Sa, Ma, Ar, Chu, SJ, Clar, Urb, Amb B	270 - 1800	bg, bb, mt, p, zu, zcu	A,B	(V, Ra)
Pitangus sulphuratus (Linnaeus 1766)	Sa, Ma, Ar, Pot, Chu, Cal, SJ, Sos, Clar, Urb -b	270 - 1200	bb, p, mt, zu, zcu	A,B	(V, Ra)
Conopias cinchoneti (Tschudi, 1844)	Amb B	1800	bm	A	(V) NR
Myiodynastes chrysocephalus (Tschudi 1844)	Clar, Amb B, Gua	1800 - 2100	bm, bb	A,B	(V)
Myiodynastes luteiventris(P. L. Sclater, 1859)	Fl	2100	Bs	A	(V) RE M

Table 2. *Continued.*

TAXON	LOCALITY	ELEVATION (M A.S.L)	HABITAT	SOURCE	OBSERVATION
Myiodynastes maculatus (Muller 1766)	Cal, SJ, Urb	1200	bs, bb, mt, p, zu	A,B	(V, Ca, Fo) M
Megarynchus pitangua (Linnaeus 1766)	Sa, Chu, SJ, Urb	750 - 1200	bs, bb, mt, p, zu	A	(V, Ra)
Tyrannus melancholicus (Vieillot 1819)	Sa, Ma, Chu, Cal, Clar, Urb	270 - 2100	bb, mt, p, zu, zcu, ca	A,B	(V, Ra)
Tyrannus savana (Vieillot 1819)	Sa, Ma, Chu, Cal, Clar, Urb	270 - 1200	p, zu, zcu	A,B	(V, Ra) M
Tyrannus tyrannus (Linnaeus 1758)	Clar, Urb	1200 - 1800	Zu	A,B	(V) M
Sirystes sibilator (Vieillot 1818)	SJ	1200	bs, p	B	(V)
Myiarchus apicalis (Sclater & Salvin 1881)	Ma, Cal, Clar	270 - 1400	bs, bb, mt, p	A,B	(V, Ra) E
Myiarchus cephalotes (Taczanowski 1879)	Clar, Amb B	1800	bs, bb	A,B	(V, Ra)
Myiarchus tyrannulus (Muller 1776)	SJ	1200	bs, p	B	(V)
Cotingidae					
Ampelion rubrocristatus (d´Orbigny & Lafresnaye 1837)	Cas	3600	vp, bb	A	(V)
Pipreola riefferii	Amb C, Gua	2100	bm, bb	A	(V, CZUT - Or 467)
Pipridae					
Masius chrysopterus (Lafresnaye, 1843)	Amb B	1800	Bm	A	(V, Ca, Fo) RE MI
Manacus manacus (Cassin 1851)	Pot, Chu, Cal, Sos	700 - 1200	bs, bb	A	(V, Ca, Fo)
Chiroxiphia lanceolata (Wagler 1830)	Sa, Ma, Ar	270 - 900	bs, bg	A,B	(V, Ca, Fo, Ra XC96372)
Xenopipo flavicapilla (Sclater 1852)	Clar	1800	Bm	B	(V, Ca, Fo) S - end NT
Tityridae					
Pachyramphus versicolor (Hartlauv 1843)	Clar	1800	bs, bb	B	(V)
Vireonidae					
Cyclarhis gujanensis (Gmelin 1789)	Sa, Ar, MV, SJ, Clar	310 - 1800	bs, bb, mt, p	A,B	(V, Ra XC96345, Ca, Fo)
Vireo leucophrys (Lafresnaye 1844)	Cal, Clar, Amb B	1200 - 1800	bs, bb	A,B	(V, Ca, Fo)
Vireo olivaceus (Linnaeus 1766)	Ma, SJ	270 - 1200	Bs	A,B	(V, Ca, Fo) M
Hylophilus semibrunneus (Lafresnaye 1845)	Clar	1800	bs, bb	A,B	(V, Ra, Ca, Fo)
Hylophilus flavipes (Lafresnaye 1845)	Sa, Ma, Ar, Pot, Chu, SJ, Sos, Clar, Urb	270 - 1200	bs, bb, mt, p, zu, zcu	A,B	(V, Ra, Ca, Fo)
Corvidae					
Cyanolyca armillata (Gray 1845)	Pal	2800	bm, bb	A	(V, Ra)
Cyanocorax affinis (Pelzeln 1856)	Sa, Ma, Ar, Chu	270 - 900	bs, bb, bg, ac, mt, p	A,B	(V, Ra, Ca)
Cyanocorax yncas (Boddaert 1783)	Clar, Amb B, Gua, Fl	1800 - 2100	bm, bs, bb	A,B	(V, Ra)
Hirundinidae					
Tachycineta albiventer (Boddaert 1783)	Sa	900	bs, bg	B	(V, Fo)
Progne chalybea (Gmelin 1789)	Urb	1200	p, zu	A,B	(V) M
Pygochelidon cyanoleuca (Vieillot 1817)	MV, Cal, SJ, Sos, Clar, Urb, Amb B - C, Gua, Fl	1200 - 2100	bb, mt, p, zu, zcu	A,B	(V, Fo)
Orochelidon murina (Cassin 1853)	Clar, Pal, Cas, Est	1200 - 3600	bb, mt, p, zu, zcu	A,B	(V, Fo, Ra XC96387)
Orochelidon flavipes (Chapman 1822)	Clar, Amb A - B	1500 - 1800	ca	A	(V)
Stelgidopteryx ruficollis (Bang 1901)	Ma, Ar, MV, SJ, Clar, Urb	270 - 1200	mt, p, zcu	A,B	(V, Fo, CZUT - Or 478, 522)
Riparia riparia (Linnaeus 1758)	Sa	900	P	B	(V, Fo) M
Hirundo rustica (Linnaeus 1758)	Sa, Ma, Chu	900	P	A,B	(V, Fo) M
Troglodytidae					
Troglodytes aedon (Vieillot 1809)	Ma, Ar, Chu, Cal, SJ, Sos, Clar, Urb, Amb A - B	270 - 1800	mt, p, zcu, zu	A,B	(V, Ra, Fo, Ca)
Troglodytes solstitialis (Sclater 1859)	Amb B, Pal, Cas	1800 - 3600	Bm	A	(V, Ra)
Cistothorus platensis (Latham 1790)	Cas	3600	Vp	A	(V, Ra XC96375, XC96379)
Campylorhynchus griseus (Pelseln 1875)	Sa, Cal, SJ, Urb, Amb A	900 - 1600	p, mt, zcu	A,B	(V)
Pheugopedius fasciatoventris (Lafresnaye 1845)	Ar, Pot, Chu, Cal, SJ, Sos, Clar, Urb, Amb A - B	310 - 1800	bs, bb	A,B	(V, Ra, Ca, Fo)
Pheugopedius mystacalis (Sclater 1860)	Clar, Amb B, Amb C, Gua, Fl	1800 - 2100	bm, bs, bb	A,B	(Ra XC96413; CZUT - Or 511)
Pheugopedius sclateri (Taczanowski 1879)	Clar	1800	Bs	B	(V)
Cantorchilus leucotis (Lafresnaye 1845)	Ar	310	bs, bb	A	(V, Ra)
Henicorhina leucosticta (Cabanis 1847)	Sa, Clar	780 - 1400	Bs	A,B	(V, Ra, Ca)
Henicorhina leucophrys (Tschudi 1844)	Clar, Amb B - C, Fl, Pal	1800 - 2800	bm, bs, bg	A,B	(V, Ra, Ca)

Table 2. *Continued.*

TAXON	LOCALITY	ELEVATION (M A.S.L)	HABITAT	SOURCE	OBSERVATION
Polioptilidae					
Polioptila plumbea (Gmelin 1788)	Sa, Ma, Ar, Chua a - b	270 - 900	mt, bb, p, zcu	A,B	(V, Ra XC96416)
Cinclidae					
Cinclus leucocephalus (Tschudi 1844)	Pal	2800	bg, ac	A	(V)
Turdidae					
Myadestes ralloides (Orbigny 1840)	Clar, Amb B - C, Gua, Fl	1800 - 2100	bm, bg, bb	A,B	(V, Ra; CZUT - Or 479)
Catharus fuscater (Lafresnaye, 1845)	Clar, Gua	1800 - 2100	bm, bg	A	(Ca, Fo, CZUT - Or 468)RE MI
Catharus minimus (Lafresnaye 1848)	Clar, b	1400 - 1600	bs, bb	A,B	(V) M
Catharus ustulatus (Nuttall 1840)	Chu, Cal, SJ, Sos, Clar, Urb, Amb B, Fl	1200 - 2100	bg, bs	A,B	(V, CZUT - Or 480) M
Turdus leucops (Taczanowski, 1877)	Amb B	1800	bm, bg	A	(V, CZUT - Or 523) RE MI
Turdus fuscater (Lafresnaye & Orbigny 1837)	Clar, Amb C, Gua, Fl, Pal, Cas, Est	1800 - 3600	bs, bb, mt, p, zcu, vp	A,B	(V, Ra, CZUT - Or 477, 489)
Turdus serranus (Tschudi 1844)	Clar, Amb C	1800 - 2100	Bm	A,B	(V, Fo)
Turdus leucomelas (Spix 1824)	Ar, SJ, Sos, Clar, Urb	310 - 1200	bs, bg, bb	A,B	(V, Ca, Fo)
Turdus ignobilis (Sclater 1857)	Ar, Pot, Chu, MV, Cal, SJ, Sos, Clar, Urb, Amb B	310 - 1800	bs, bg, bb, mt, p, zu, zcu, ca	A,B	(V, Ca, Fo)
Mimidae					
Mimus gilvus (Viellot 1808)	SJ, Urb, Amb B	1200 - 1800	bb, mt, p, zu, zcu	A,B	(V, Ra)
Thraupidae					
Sericossypha albocristata (Lafresnaye 1843)	Pal	2800	bm	A	(V, Ra)
Creurgops verticalis (Sclater 1858)	Clar, Amb B	1800	Bm	A,B	(V, Ca, Fo)
Hemispingus superciliaris (Lafresnaye 1840)	Pal, Cas	2800 - 3600	bm, bb	A	(V)
Hemispingus frontalis (Tschudi 1844)	Clar, Amb C	1800 - 2100	bm, bb	A	(V, Ca, Fo, CZUT - Or 487)
Hemispingus verticalis (Lafresnaye 1840)	Pal, Cas	2800 - 3600	bm, vp	A	(V, Fo, CZUT - Or 498, 507)
Cnemoscopus rubrirostris (Lafresnaye 1840)	Pal	2800	Bm	A	(V)
Eucometis penicillata (Dubus 1855)	Sa, Pot, Chu, MV, Cal, SJ, Sos, Clar	700 - 1800	bs, bg, bb	A,B	(V, Fo, CZUT - Or 501)
Tachyphonus luctuosus (Orbigny y Lafresnaye 1837)	Chu, MV, Cal, SJ, Sos, Urb	750 - 1200	bs, bb	A,B	(V, Ca, Fo)
Tachyphonus rufus (Boddaert 1783)	Amb A	1500	bs, bb, mt, zcu	A	(V)
Ramphocelus dimidiatus (Lafresnaye 1837)	Ma, Ar, Pot, Chu, MV, Cal, SJ, Sos, Clar, Urb, Amb A - B	270 - 1800	bs, bg, bb, mt, p, zu, zcu	A,B	(V, Ra, Ca, Fo, CZUT - Or 481)
Ramphocelus flammigerus icteronotus (Jardine & Selby 1833)	Amb A	1500	bs, bb, zcu	A	(V) S - end
Thraupis episcopus (Linnaeus 1766)	Sa, Ma, Ar, Pot, Chu, MV, Cal, SJ, Sos, Clar, Urb, Amb B - C, Gua, Fl	270 - 2100	bs, bb, mt, p, zu, zcu	A,B	(V, Ca, Fo)
Thraupis palmarum (Wied-Neunied 1821)	Ma, Pot, Chu, MV, Cal, SJ, Sos, Clar, Urb, Amb A - B, Gua	270 - 2100	bs, bb, mt, p, zu, zcu	A,B	(V, Ca, Fo)
Thraupis cyanocephala (d´ Orbigny & Lafresnaye 1837)	Clar, Amb A, Amb C, Gua	1200 - 2100	bm, bs, bb	A,B	(V, Ca)
Buthraupis montana (Orbigny & Lafresnaye 1837)	Cas	3600	Bm, bb, vp	A	(V)
Anisognathus lacrymosus (Du Bus de Gisignies 1847)	Clar, Pal, Cas	3600	bm, bb, vp	A,B	(V, CZUT - Or 497, 505)
Anisognathus igniventris (Orbigny & Lafresnaye 1837)	Pal, Cas, Est	2100 - 3600	bm, vp	A	(V, Ra XC96370)
Anisognathus somptuosus (Lesson 1831)	Clar, Amb B - C, Gua, Fl	1800- 2100	bm, bb	A	(V, Ca)
Chlorornis riefferii (Boissonneau 1840)	Pal, Cas	3600	Bm	A	(V)
Pipraeidea melanonota (Vieillot 1819)	Clar	1800	bb, p	A,B	(V, Ca, Fo)
Tangara arthus (Lesson 1832)	Clar, Amb B, Fl	1800 - 2100	bm, bs, bb, ca	A,B	(V, Ca)
Tangara xanthocephala (Tschudi 1844)	Clar, Amb B, Gua	1800 - 2100	bm, bb	A,B	(V, Ca)
Tangara parzudakii (Lafresnaye 1843)	Clar, Amb B	1800 - 2100	Bm	A,B	(V, Fo)
Tangara gyrola (Linnaeus 1758)	Cal, SJ, Sos, Clar, Urb, Amb A - B	1200 - 1800	bs, bb, mt, p, zu, zcu, ca	A,B	(V, Ca, Fo)
Tangara vitriolina (Cabanis 1850)	Ar, Chu, MV, Cal, SJ, Sos, Clar, Urb, Amb A - B, Fl	310 - 2100	bs, bb, mt, p, zu, zcu, ca	A,B	(V, Ca, Fo) C - end
Tangara ruficervix (Prevost & Des Murs 1846)	Clar, Amb B	1800	bm, bb	A,B	(V)
Tangara labradorides (Boissonneau 1840)	Clar, Amb C	1800 - 2100	bm, bb	A,B	(V)
Tangara cyanicollis (Orbigny & Lafresnaye 1837)	Sa, MV, Cal, SJ, Sos, Clar, Urb, Amb A - B	900 - 1800	bs, bb, mt, p, zu, zcu, ca	A,B	(V, Ca, Fo)
Tangara nigroviridis (Lafresnaye 1843)	Clar, Amb C	1800 - 2100	bm, bb	A,B	(V, Ca, Fo)

Table 2. C*ontinued.*

TAXON	LOCALITY	ELEVATION (M A.S.L)	HABITAT	SOURCE	OBSERVATION
Tangara vassorii (Boissonneau 1840)	Clara b, Gua, Pal	1800 - 2800	bm, bb	A,B	(V, Ca, Fo)
Tangara heinei (Cabanis 1850)	Clar, Amb C, Gua	1800 - 2100	bm, bb	A,B	(V, Ca, Fo)
Tersina viridis (Sclater 1858)	SJ, Amb B	1200 - 1800	Bm	A,B	(V)
Dacnis lineata egregia (Gmelin 1789)	Cal, SJ, Clar, Urb, Amb A	1200 - 1500	bs, bb	A,B	(V, Fo)
Dacnis cayana (Linnaeus 1766)	Chu	750	Bs	A	(V)
Hemithraupis guira (Linnaeus 1766)	Clar	1400	bs, bb	B	(V)
Conirostrum leucogenys (Lafresnaye 1852)	Ma	270	Bs	A	(V) RE
Conirostrum sitticolor (Lafresnaye 1840)	Cas, Est	3600	Vp	A	(V, Fo, CZUT - Or 508)
Conirostrum albifrons (Lafresnaye 1842)	Clar, Pal	1800 - 2800	bm, bb	A,B	(V)
Diglossa sittoides (Orbigny & Lafresnaye 1838)	Clar	1800	mt, p, zcu	A,B	(V, Ca, Fo)
Diglossa lafresnayii (Boissonneau 1840)	Cas, Est	3600	Vp	A	(V, Fo, CZUT - Or 502)
Diglossa albilatera (Lafresnaye 1843)	Clar, Amb C, Gua	1800 - 2100	bm, bs, bb	A,B	(V, Ca)
Diglossa caerulescens (Sclater 1856)	Clar, Amb C	1800	bm, bs	A,B	(V, Ca, Fo)
Diglossa cyanea (Lafresnaye 1840)	Clar, Amb C, Gua, Pal, Cas	1800 - 3600	bm, bs, bb, zcu	A,B	(V, CZUT - Or 495)
Urothraupis stolzmanni (Taczanowski & Berlepsh 1885)	Cas	3600	bm, vp	A	(V) S - end
Phrygilus unicolor (Bonaparte 1853)	Cas, Est	3600	vp, p	A	(V, Fo)
Sicalis flaveola (Linnaeus 1766)	Sa, Ma, Pot, Chu, MV, Cal, SJ, Sos, Clar, Urb, Amb A - B	270 - 1800	mt, p, zu, zcu	A,B	(V, Ca, Fo)
Volatinia jacarina (Linnaeus 1766)	Sa, Ma, Ar, Chu, MV, Cal, SJ, Sos, Clar, Urb, Amb B	270 - 1800	mt, p, zu, zcu	A,B	(V, Ca, Fo)
Sporophila schistacea (Bourcier 1843)	Sa, Chu, MV, MV, SJ, Sos, Clar, Amb A	750 - 1500	mt, p, zcu	A,B	(V, Ca, Fo)
Sporophila intermedia (Cabanis 1851)	Pot	700	mt, p	A	(V)
Sporophila nigricollis (Vieillot 1823)	Sa, Ma, Chu, SJ, Sos, Clar, Urb, Amb A	270 -1500	bb, p, mt, zu, zcu	A,B	(V, Ca, Fo)
Sporophila minuta (Linnaeus 1758)	Sa, Ma, MV, Cal, SJ, Urb	270 - 1200	p, mt, zcu, zu	A,B	(V, Ca, Fo)
Oryzoborus angolensis (Linnaeus 1766)	Sa	900	bs, mt, p	B	(V, Ca, Fo)
Oryzoborus crassirostris (Gmelin 1837)	Sa	900	bs, bb, p	B	(V)
Catamenia inornata (Lafresnaye 1847)	Est	3600	Vp	A	(V, Ra XC96315)
Catamenia homochroa (Sclater 1858)	Cas	3600	Vp	A	(V, Ra)
Coereba flaveola (Linnaeus 1758)	Ma, Ar, Chu, MV, Cal, SJ, Sos, Clar, Urb, Amb A - B	270 - 1800	bs, bb, mt, p, zu, zcu, ca	A,B	(V, Ca, Fo)
Tiaris olivaceus (Linnaeus 1766)	Clar, Amb B, Fl	1800 - 2100	bb, mt, p, ca	A,B	(V, Ca, Fo)
Tiaris bicolor (Jardini 1847)	Sa, Ma, Ar, Cal, SJ, Sos, Urb	270 - 1200	mt, p, zu	A,B	(V, Ca, Fo)
Tiaris obscurus (Lafresnaye y d´Orbigny 1837)	Sa, Cal, Urb	900 - 1200	mt, p, zu, zcu	A,B	(V, Ca, Fo)
Emberizidae					
Zonotrichia capensis (Müller 1776)	Cal, SJ, Clar, Urb, Amb A - B - C, Gua, Fl, Pal, Cas, Est	1200 - 3600	bb, p, mt, zu, zcu	A,B	(V, Fo, Ra XC96389, XC96390)
Ammodramus humeralis (Bosc 1792)	Sa, Chu	750 -900	mt, p	B	(V, Ca, Fo)
Arremonops conirostris (Bonaparte 1850)	Pot, Sos	700 - 1200	bb, mt, p	A	(V, Ca, Fo)
Arremon aurantiirostris (Sclater 1855)	Sa, Ar, Pot, Chu, SJ, Sos, Amb A	310 - 1500	bs, bg, bb	A,B	(V, Ra, Fo, CZUT - Or 499, 512)
Arremon brunneinucha (Lafresnaye 1839)	Gua, Fl, Pal	1800 - 2800	bm, bb	A,B	(V, Ra, CZUT - Or 466, 473, 503, 509, 528)
Arremon torquatus assimilis (Lafresnaye & Orbigny 1837)	Pal	2800	Bm	A	(V, Fo, CZUT - Or 529)
Atlapetes albinucha (Lafresnaye & D'Orbigny 1838)	Clar, Amb B, Fl	1800 - 2100	bb, mt	A,B	(V, Ca, Fo)
Atlapetes pallidinucha (Boissonneau 1840)	Clar, Cas, Est	1800 - 3600	Vp	A,B	(V)
Atlapetes flaviceps (Chapman 1912)	Clar, Amb B - C, Gua, Fl	1600 - 2100	bm, bs, bb, mt	A,B	(V, Fo, CZUT - Or 485) E EN
Atlapetes schistaceus (Boissonneau 1840)	Clar, Pal, Cas	1800 - 3600	Bm	A,B	(V, Fo, CZUT - Or 494,496, 526, 549)
Coryphospingus pileatus(Linnaeus 1758)	Sa, Ar, Chu	310 - 900	bb, mt, p	A,B	(V, Ra, Fo, CZUT - Or 514)
Chlorospingus ophthalmicus (Du Bus de Gisignies 1847)	Clar, Amb C, Gua	1800 - 2100	bm, bg	A,B	(V, Ca, Fo)
Chlorospingus canigularis (Lafresnaye 1848)	Clar	1800	bb, bs	B	(V)
Cardinalidae					
Pheucticus ludovicianus (Linnaeus 1766)	Cal, Clar	1200 - 1800	bb, mt	A,B	(V, Ca, Fo) M
Piranga rubra (Linnaeus 1758)	Sa, Chu, MV, SJ, Sos, Clar, Urb, Amb B, Fl	750 - 2100	bm, bs, bb, mt, zcu, zu	A,B	(V, Ca, Fo) M
Habia cristata (Lawrence 1875)	Clar, Amb B	1800	bm, bg, bs, bb	A,B	(V, Ca, Fo, Ra XC96476) E

TABLE 2. C*ONTINUED.*

TAXON	LOCALITY	ELEVATION (M A.S.L)	HABITAT	SOURCE	OBSERVATION
Parulidae					
Leiothlypis peregrina (Wilson 1811)	Cal, SJ, Sos, Amb B, Fl	1200 - 2100	bs, bb, mt	A,B	(V, Fo) M
Parula pitiayumi (Vieillot 1817)	SJ, Clar, Amb B, Fl	1200 - 2100	bs, bb, zcu, ca	A,B	(V, Ra)
Setophaga petechia (Gmelin 1789)	Ma, MV, Cal, SJ, Sos, Urb	270 - 1200	bs, bb, bg	A,B	(V, Ca, Fo)
Setophaga striata (Forster 1772)	Ma	270	Bs	A	(V) M
Setophaga castanea (Wilson 1810)	Cal, SJ	1200	bs, bb	A,B	(V, Fo) M
Setophaga fusca (Müller 1776)	SJ, Clar- b, Amb B, Fl	1200 - 2100	bm, bs, bb	A,B	(V, Ca, Fo) M
Setophaga cerulea (Wilson 1810)	Clar, Urb	1200 - 1800	bs, bb	A,B	(V, Ca, Fo) VU M
Setophaga ruticilla (Linnaeus 1758)	Cal, Sos, Clar	1200 - 1800	bs, bg	A,B	(V, Ca, Fo) M
Mniotilta varia (Linnaeus 1766)	MV, Cal, SJ, Sos, Clar, Amb B, Gua, Fl	1200 - 2100	bs, bb, bg	A,B	(V, Ca, Fo) M
Parkesia noveboracensis (Vieillot 1808)	Sos	1200	bs, bb, bg	A	(V) M
Geothlypis philadelphia (Wilson 1810)	Cal, Sos, Clar	1200 - 1800	Bg	A,B	(V) M
Cardellina canadensis (Linnaeus 1766)	Chu, MV, Cal, SJ, Sos, Clar, Urb, Amb B, Gua	750 - 2100	bs, bb, bg	A,B	(V, Ca, Fo) M
Myioborus miniatus(Swainson 1827)	Clar, Amb B - C, Gua, Fl	1800 - 2100	bm, bs, bb	A,B	(V, Ca, Fo)
Myioborus ornatus (Boissonneau 1840)	Clar, Pal, Cas	1800 - 3600	bm, bs, bb	A,B	(V, Fo, CZUT - Or 504)
Basileuterus nigrocristatus (Lafresnaye 1840)	Clar. Amb C	1800 - 2100	Bm	A,B	(V, Ra)
Basileuterus coronatus(Tschudi 1844)	Clar, Amb B - C, Gua, Fl, Pal	1800 - 2800	bm, bg	A,B	(V, Ca, Fo, Ra XC96367; CZUT - Or 517, 519)
Basileuterus rufifrons(Spix 1825)	Ma, Ar, Pot, Chua, Mv, Cal, SJ, Sos, Clar, Urb, Amb A	270 - 1500	bs, bb,bg	A,B	(V, fo, CZUT - Or 482, 515)
Basileuterus tristriatus(Tschudi 1844)	Clar, Amb B - C, Gua	1800 - 2100	Bm	A,B	(V, ca, Fo)
Phaeothlypis fulvicauda(Spix 1825)	Ma, Ar, Pot, Chu, Mv, Cal, Sj, Sos, Clar, Urb, Amb B	270 - 1800	bs, bg	A,B	(V, ca, Fo)
Icteridae					
Cacicus cela (Linnaeus 1758)	Urb	1200	bs, zu	A,B	(V, Fo)
Icterus chrysater (Lesson 1844)	SJ, Cal, Clar, Urb, Fl	1200 - 2100	bs, mt, zu, ca	A,B	(V, Ra)
Icterus nigrogularis (Hahn 1819)	Ma, Chu, Cal, SJ, Urb	270 - 1200	bs, mt, zu	A,B	(V, Ra, Ca, Fo)
Chrysomus icterocephalus(Linnaeus 1766)	Sa, Ma, Ar, Chu, SJ, Urb	270 - 1200	mt, zcu, zu	A,B	(V, ca, Fo)
Molothrus oryzivorus (Gmelin 1788)	Ma	270	mt, bb, p, zcu	A	(V)
Molothrus bonariensis(Gmelin 1789)	Sa, Ma, Ar, SJ, Sos, Clar, Urb	270 - 1200	bs, bb, mt, p, zu, zcu	A,B	(V, Fo)
Sturnella militaris (Linnaeus 1758)	Sa, Ma, Urb	270 - 1200	Zu	A,B	(V, Ra, Fo)
Sturnella magna (Linnaeus, 1758)	Fl,Pal	2100 - 2800	p, zcu	A	(V, Ra)
Fringillidae					
Sporagra magellanica (Cabanis 1866)	Est	3600	Vp	A	(V, Ra)
Astragalinus psaltria (Say 1823)	Sa, MV, Cal, Clar, Urb, Amb A - B	900 - 1800	mt, p, zu, zcu	A,B	(V, Ra, Ca, Fo)
Sporagra xanthogastra (Du Bus de Gisignies 1855)	Gua	2100	Bb	A	(V, Ra)
Euphonia concinna (Sclater 1855)	Ma, Chu, Urb	270 - 1200	bb, mt, p, zu, zcu	A	(V, ca, Fo) E
Euphonia laniirostris (Orbigny y Lafresnaye 1837)	Sa, Ma, Ar, Pot, Chu, Cal, SJ, Sos, Clar, Urb, Amb A - B	270 - 1800	bs, bb, mt, zu, zcu	A,B	(V, ca, Fo)
Euphonia cyanocephala (Vieillot 1819)	Clar	1800	bb, zcu	A,B	(V)
Euphonia xanthogaster (Sundevall 1834)	Clar, Amb B	1800	bm, bb	A,B	(V, Ra, Ca)
Chlorophonia pyrrhophrys (Scalter 1851)	Clar	1800	bm, bb	A,B	(V)
Estrilididae					
Lonchura malacca (Lafresnaye 1843)	Sa	900	mt, p, zuc	B	(V, Ra, Ca) INT
Incertae Sedis					
Saltator grossus (Linnaeus, 1766)	Chu	750	Mt	A	(V) RE MI
Saltator maximus (Müller 1776)	Chu, MV, Cal, SJ, Sos, Clar, Urb	750 - 1200	bs, bb, mt	A,B	(V, Ca, Fo)
Saltator atripennis (Sclater 1857)	Clar, Amb A	1500 - 1800	bs, bb	A,B	(V, Ca, Fo)
Saltator coerulescens (Bangn & Penard 1918)	Sa, Ar, Chu, Cal, Clar, Urb	310 - 1200	bb, mt, p	A,B	(V, Ca, Fo)
Saltator striatipectus (Vieillot 1817)	Sa, Ma, Ar, Chu, MV, Cal, SJ, Sos, Clar, Urb, Amb A - B	270 - 1800	bs, bb, mt, p, zu, zcu	A,B	(V, Ca, Ra XC96477)

Table 3. New records of bird species in the Ibagué municipality, Tolima, Colombia.

SPECIES	LOCALITY	DATA OF RECORD	ADDITIONAL INFORMATION
Aburria aburri (Lesson 1828)	Ambala, Reserva Forestal Bella Vista.	May 2007	This visual record refers to an individual vocalizing.
Micrastur ruficollis (Vieillot 1817)	Ambala, Reserva Forestal Bella Vista and Palomar.	Feb. 2007	Two individuals captured in Ambala.
Pardirallus maculatus (Boddaert 1783)	The city of Ibagué, Calarca residential neighborhood, in marshlands.	2000 - 2007	Recorded several times, but at present the locality does not have marshlands.
*Lesbia nuna (*Lesson 1832)	Ambala, Finca parte Alta.	Jun. 2007	
Thripadectes virgaticeps	Clarita Botero parte alta and Ambala, Reserva Forestal Bella Vista.	Feb. 2007	
Xiphorhynchus triangularis	Vereda Chucuni.	Feb. 2007	One individual captured.
Dysithamnus leucostictus (Sclater, 1858)	Ambala, Reserva Forestal Bella Vista.	Feb. 2007	One individual captured in Ambala.
Phyllomyias griseiceps (P. L. Sclater & Salvin, 1871)	Clarita Botero parte alta and Ambala, Reserva Forestal Bella Vista .	Feb. 2007	Also recorded in the Botanical gardens of the Tolima University.
Contopus cooperi (Nuttall, 1831)	Ambala, Reserva Forestal Bella Vista and Ambala, Finca parte Alta.	Feb. 2007	
Conopias cinchoneti (Tschudi, 1844)	Ambala, Reserva Forestal Bella Vista.	Feb. 2007 and May 2007	Six individuals registered.
Masius chrysopterus (Lafresnaye, 1843)	Ambala, Reserva Forestal Bella Vista.	Feb. 2007	Three individuals registered, one in mixed-species flocks.
Catharus fuscater (Lafresnaye, 1845)	Clarita Botero parte alta	Mar. 2007 and May 2007	One individual captured in Clarita Botero.
Turdus leucops (Taczanowski, 1877)	Ambala, Reserva Forestal Bella Vista.	Feb. 2007 and May 2007	Three individuals registered, one individual captured in Ambala.
Saltator grossus (Linnaeus, 1766)	Vereda Chucuni.	Feb. 2007	

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